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The Executive Wife: Facts vs. Fiction

IN THE CURRENT FOLKLORE of U.S. business the wife of an executive is often represented as being equally important to her husband's career as his own abilities. Some U. S. corporations interview wives before hiring or promoting executives; others regularly appraise executive wives by visits to the home or at corporate parties. A few even provide seminars and conferences for wives in an attempt to fashion the ideal executive helpmate. All this has prompted a string of articles, fiction and movies depicting the ideal "Mrs. Executive"—a woman who furthers her husband's career by molding herself into the pattern of corporate living, helping to achieve success by an endless round of professional sociability.

Recently the Chicago management-engineering firm of John A. Patton, Inc., released a survey of 4,000 wives of the nation's top executives—the women who are supposed to set the pattern. The results offer some hard facts to challenge the proposition that executive wives must also marry the corporation. Sixty per cent of the wives polled advised the young executive wife to remain aloof from corporate contacts and attend only necessary social functions, such as conventions; even the 40 per cent who disagreed recommended only "a

middle ground" of sociability. Said the wife of a Michigan Bell Telephone Co. vice president: "It seems wiser to have one's best friends outside the company." Many of the wives reported that they had seen careers hampered rather than helped by overly chummy wives as well as by those who drank or talked too much.

While more than half the women felt that the executive wife could well undergo some company appraisal, most drew the line at anything so crass as an interview. They favored informal methods—e.g., dropping in at home. The dissent (45 per cent) to even this moderate approach was surprisingly vehement. Said Mrs. Elizabeth Harvey, wife of the director of industrial relations for a G.M. division: "This recent development is abhorrent to any sensible woman who desires to be a homemaker as opposed to a business appendage."

Such opinions highlight a growing revulsion—among both men and women—from the much-publicized concept of a "corporate wife." The men who hire or promote executives are still far more interested in the husband's abilities than in the wife's worth. Says an Atlanta executive: "We need good men so bad they could be married to almost anyone

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and we'd grab 'em. Of course, we'd prefer she didn't use a toothpick, but beyond that she's his problem, not ours." Most corporations hope for some social relationships among executives, but do not try to force them by selecting wives to fit into a pattern. "I doubt very much," says Mrs. George Romney, wife of the president of American Motors, "if anything very important is ever accomplished at parties."

Even among the few firms that insist on formal interviews, the general feeling is that a wife affects her husband's advancement only when their home life is so strained that it harms his work—and even then he is not necessarily disqualified. "Anything that a company might do to imply that advancement depends on the wife's activities," says a Carnation Co. executive, "is a kiss of death to the whole idea of better understanding in the company."

Most executives think—and their wives agree—that the executive wife should be moderately informed about her husband's business, yet not so concerned that she meddles in his work or tries to push him. (The wife of a \$30,000-a-year Detroit executive recently got ulcers while sweating out a promotion for her husband;

he came through fine.) Qualities of tact, graciousness and amiability are important if the company is in a small town or if the husband is a sales executive who must entertain frequently.

But few top executives really expect wives to conform to any stereotyped image. Said Joseph E. Adams, vice president of White Motor Co.: "Consider the nation's top executives. How many of them would have been hired if wives had been a factor in the selection? Some men need a psychiatrist at home who will listen to their problems. Others need frivolous wives to distract them. Some need wives who are prominent in civic activities, some not. You can't type a wife."

Again and again executive wives themselves state firmly that the only sensible approach to the goal of being an ideal executive wife is to relax and forget about emulating a prototype. As another executive's wife put it: "You can't afford to get too inhuman about everything, and you can't be too sophisticated about how you act. The best thing is just to try to be yourself."

■ TIME,
March 4, 1957,
p. 88:1.

WAGE INCREASES: 87 per cent of the 168 respondents to a recent *Mill & Factory* survey of industrial firms expect to grant wage increases to their workers this year; 71 per cent say these increases will involve both hourly and salaried workers. More than 90 per cent say that wage increases will mean higher product prices, and, although 21 per cent of the companies felt that some wage increases might be warranted by increased productivity, 70 per cent were sure higher wages would contribute to inflation.

Five Forces Shaping Our Business Future

OF THE MANY CHANGES modifying the American economy, five are particularly important to business managers. Examination of these trends will perhaps reveal the need for a reappraisal of present business organization and operating procedures.

The first of these forces is the growing capacity of the economy to increase production and to make technological changes. One reason for this is the rise in per capita output, which helps people to acquire skills. As per capita output increases, a larger and larger proportion of the population can afford to go to high school, trade school, or college. Today, the number of persons graduating from colleges and universities each year is about five times as large, relative to total population, as it was in 1900.

The second trend is the growing capacity of the economy to increase the demand for goods. An increasing rate of technological discovery helps enterprises to stimulate demand by offering consumers new and better goods or cheaper goods, which they are willing to buy even at the cost of going into debt.

Industry's ability to expand the demand for goods is also being increased by rising per capita and family incomes. The proportion of income spent on necessities is dropping, and the proportion spent to suit the whims of the individual is rising. Thus, new and improved products stand a better chance of

getting a share of the consumers' dollars.

Rising per capita and family incomes improve the credit of consumers and are the foundation for the recent spectacular growth of the consumer credit industry. Between 1929 and the present, consumer credit has expanded from \$7.6 billion to about \$40 billion.

The third important trend is the tendency of the economy to outgrow the business cycle. During recent years, there have been deliberate efforts by the community to limit the fluctuations of business. These include, in part at least, the development of a flexible credit policy; laws to strengthen the banking system; tax liability that rises and falls with incomes; unemployment compensation; and compensatory government spending.

Even more important than these are unplanned developments that were not intended to limit the business cycle. These include: (1) the increase in the number of important industries, which tends to dampen the effects of any favorable or unfavorable developments upon the economy because such developments affect different industries in different degrees and at different times; (2) the growing importance of long-term planning by business management; (3) the development of long-term wage contracts with built-in wage increases; (4) improvements in the banking system.

The fourth significant trend is the development of factors that tend to produce a slowly rising price level. One of these factors is the growing capacity of the economy to increase the demand for goods. Another is the prospect that the labor cost required to obtain given quantities of nonreplaceable raw materials (petroleum and metals) will increase.

The most important reason for expecting a slow rise in prices is the bargaining power of trade unions. If the economy succeeds in maintaining a strong demand for goods and a high level of employment, the unions will push up wages and fringe benefits a little faster than gains in the productivity of labor.

The final trend is the increasing intensity of competition. This is reflected in the rather poor record of corporate profits during the past five years. In 1956, profits after inventory valuation adjustment ran at about the same rate as in 1951, when the total output of the economy was about one-fifth less.

There are several reasons for keen competition: (1) People are becoming better supplied with goods and can easily postpone buying new goods; (2) every enterprise is threatened to an increasing extent with the possibility that its rivals may bring out a new or cheaper product; and (3) competition is being stimulated by the growing rewards for successful innovation.

Is it not a contradiction to argue

that competition is growing more intense but prices are likely to creep upward? Will not competition prevent prices from rising? The answer is no. Competition will prevent prices from rising *faster* than costs, but it will not prevent prices from being adjusted in the long run to cost rises.

These five basic economic trends have far-reaching implications for the country. Our growing capacity to produce and to increase the demand for goods and the diminishing susceptibility of the economy to cyclical movements mean that the country can look forward with considerable confidence to rising productivity and to an expanding and rather stable demand.

But the threat of slowly rising prices makes it especially important that managements do what they can to raise productivity in ways that do not create sellers' markets for labor and thus raise labor costs. This can be done by getting more production from existing equipment—thereby limiting the demand for new equipment. More output can be gained from existing equipment by better selection, training, and supervision of workers, by better organization and scheduling of work, by better control of the quality of raw materials, by better planned maintenance, and, in some cases, by two-shift or three-shift operations.

■ Sumner H. Slichter. *NATION'S BUSINESS*, February, 1957, p. 29:10.

ONLY THROUGH CURIOSITY can we discover opportunities, and only by gambling can we take advantage of them.

—Clarence Birdseye

An Englishman Looks at Our "Service Economy"

IF IT PAYS to see ourselves as others see us, it may be noteworthy that *The Economist* of London, one of the world's most respected economic journals, says that the United States has a "service economy." Here is how it arrives at that conclusion:

"The United States manufactures far more than any country on earth, but it is not a manufacturing nation: only about one in four members of the labor force works in a factory. It eats very well and exports vast quantities of farm products besides, but it is not a farming nation: only 10 per cent of the labor force is now engaged in agriculture, compared with 20 per cent as recently as 1939. It builds more than any other country, except perhaps the Soviet Union, yet less than 5 per cent of the labor force is engaged in construction.

"Americans now earn their livings predominantly by providing services or by distributing and transporting goods. With workers at all levels of government added, these people come to half the total labor force and well over half the nonagricultural labor force. Consumers spend three times as much on services as they spend on all durable goods put together, including automobiles.

"It is beginning to appear that the fundamental mistake made during recent years by the pessimists . . . has been their failure to recognize the 'prosperity effect' provided by the astonishing diversity of an economy with the standard of living of America today."

Although this diversity and emphasis on service helps make the American economy more stable than one based on manufacturing or farming or both, *The Economist* observes, it has one drawback: it may hold the prospect of a constant, though slow, rise in the cost of living. The service worker must be paid "a wage in line with the rising standards of his society, but it is frequently impossible in this type of work to do anything by capital investment to improve productivity. Therefore, the price of the service must of necessity rise to cover the higher wage costs."

The Economist points out that wages of production workers rise at roughly the same rate as productivity. When other wages rise in the same ratio, it appears that total wages rise twice as much as the rise in productivity, and only price increases can provide the money with which to pay them.

—Elmer Roessner in *Business Today* (McClure Newspaper Syndicate) 1/11/57

AMA GENERAL MANAGEMENT CONFERENCE

AMA's General Management Conference will be held Monday through Wednesday, June 3-5 inclusive, at the Hotel Statler, New York.

Luxury on the Cuff: The World of the Big Expense Account

THERE ARE THREE KINDS of business men—those without expense accounts, those with expense accounts who are 'bedeviled by them, and those with expense accounts who make them into a way of life. Those without expense accounts are very rare indeed and wistful. Those who have them and find them a mixed blessing are increasing, and those who live comfortably in the lap of deductible luxury are a special, happy breed.

The expense account—its wry pleasures, its hangovers, its bonanzas and its abuses—has become one of the uneasy national jokes of our time. We have built it firmly into our economy as a method of salesmanship, even though we are not always at all sure just how effective caviar and champagne may be in the conduct of business. But further than that, it has become one of the greenest of playing fields for that all-American exercise in sportsmanship, getting around the income tax.

There has been a great deal written about the expense account and its evils in the last few years, essays with a strong moral flavor that have decried the effect of the expense account on family life, on personality and even on business ethics. In essence, they point out that while a man is doing the company's business in the most expensive restaurants, eating the most luxurious foods and

drinking the best whiskies and wines, his wife is at home with the children eating hamburger and canned apple-sauce. In other words, the expense-account man inhabits two quite disparate worlds, one when he is with his family and another while he is courting his clients. This, the moralists have pointed out, leads to a sort of national schizophrenia and a curiously garbled standard of personal values.

But, for some men in the upper reaches of corporate success, the expense account has a quite different significance. It provides them not with a fractured and schizoid way of life, not merely with an occasional pressed duck and an enriched hangover, but with a splendid pattern of living which is all of a piece. It makes it possible for them to live outside their paneled offices the same chandeliered, well-tended and wall-to-wall lives that they live on company time.

It is the expense account (and its by-products and parallels) that provides the important executive of the lucrative business with the symbols of social status. By means of it, he can affect the trappings that accumulated wealth once provided his prototype in the days before the graduated income tax. He may not live in a baronial chateau hung with Gobelin tapestries and ornamented with minor Rembrandts, but he flies

in a well-appointed company plane which is at his beck and call, rides in company limousines and fishes off the Florida Keys with his board of directors in a company-chartered boat. The command of funds that are not his but his company's, hence his stockholders', makes it possible for him to live on a scale far more lordly than his salary (by the time the government has got through with it) warrants.

There is evidence, though it is tangential, that the stockholders of corporations whose executives maintain this semblance of real wealth take it as a matter of course. In order that their companies may be able to compete for the most talented managerial personnel, they are aware that the company today must provide something more than salary. A system of rewards is obviously essential to the successful operation of the capitalist system. The trouble, if it is a trouble, is that the rewards that are represented by the private use of the company plane, the company car and the company hunting lodge do not seem like rewards for performance; they seem to a great many people like special privilege, and that, in a very real sense, is what they are meant to look like. The man who receives them says in effect, "Mind you, I'm no less democratic than you

or the next fellow. I call my colleagues by their first names and they call me by mine, but I've worked hard and I'm lucky, and what the hell, I might as well take advantage of it." He enjoys the privileges of a class apart without suffering its stigma.

What makes such a situation palatable to many Americans is, perhaps, that his privileges can be taken away from him by his board of directors at any moment. His is a social position without any assurances of self-perpetuation. He is riding a gravy train, but the train doesn't go anywhere.

In other words, the tax structure seems to create one ethic for certain business men whose services are greatly in demand by corporations, and another for the rest of us. It would be ridiculous (and useless) to blame the individual business man for this, for it is he who is being sought by the rest of us to manage our corporate affairs and we bait our hook with tinsel. Nevertheless, he looks slightly ridiculous to a great many of us, for it is we who in the long run pay our taxes to keep him in the style to which he would like to be accustomed.

■ Russell Lynes. *THE NEW YORK TIMES MAGAZINE*, March 3, 1957, p. 17:3.

BUSINESS FLYING: The number of aircraft utilized by business firms increased almost ten times in a ten-year period—from 2,500 in 1945 to more than 22,500 in 1955. During that year, manufacturers delivered more than 4,400 non-military planes, of which about 75 per cent were sold to companies for business use.

—*Best's Insurance News* 9/56

Seven Keys to Successful Executive Development

IN RECOGNITION of the urgent need to develop managers capable of successfully handling today's complex problems, General Electric Co. instituted in 1951 an extensive research project to probe the factors involved in the development of people. From four years of investigation emerged some vital principles on management development which should be of value to any company seeking to realize the full potential of its executive raw material. Here are the most important of these principles:

1. *All development is self-development.* Development is not something you do to a man. The whole drive and willingness to pay the price—because there is a price for development—must come from within the individual. You can't develop anybody but yourself.

Because of the abnormal shortage of talented young men, we must go out and recruit them in competition with thousands of other companies. The recruiter sells these boys as if he were rushing them for a fraternity. "Come to work for us," he pleads. "We have cradle-to-grave security. We have country clubs. No experience needed. We train you."

So the young men come to their jobs with the understandable attitude, "You fortunate people, you got me. Now develop me."

We may be forced by this competitive manpower situation to over-emphasize the selling part of recruit-

ing, but once these young men are hired, we certainly owe it to them to tell them that the responsibility for their development rests with them.

2. *All development is individual.* Shortly before he died, Albert Einstein said, "After 70-odd years, there is one thing I am sure of, and that is the uniqueness of the individual."

In terms of development, this means that we cannot plan to develop all people by this method or by that method. A management development program should not be a standardized, canned procedure. There must be as many management development programs as there are people being developed.

3. *The opportunity for self-development must be universal.* Let there be no fair-haired boys, no artificial selecting of so-called "high-potential" men. This kind of exclusiveness is wrong, not only intellectually but morally. Look over everybody in your company and see if you haven't got some men now on your payroll who, if given the proper opportunity and the proper climate, would fill one of those spots you will so urgently need to fill.

4. *The good creative person does not necessarily make a good manager.* In planning for a man's career, there is a pivotal decision to be made. Should this man progress as a manager of others, or should he progress as an individual contributor?

Too often we have taken a creative

research man and made him an engineering manager, with the result that we lost a good creative mind and got only a mediocre engineering manager.

The key point here is the source of a man's satisfactions. The outstanding individual contributor is a man who gets his satisfactions out of what he does *himself*. He can look at his creation and say with pride, "I did that."

On the other hand, a manager must practice actual renunciation of the satisfactions that he would get out of personal creative work, and focus his attention on the accomplishments of the people who work under him. If you take a man whose basic satisfactions come from his own work, and put him in a position where his satisfactions should come from what his people do, you create in him a tension that may well crack him.

To avoid economic pressures in this decision, there should be set up in the company two parallel paths of progress, so that an individual contributor can progress just as far as a manager. Pay, status, and job satisfaction can and should be equal for both types of contribution.

5. *At least 90 per cent of a man's development takes place during his*

daily job activities. This puts the burden of responsibility for his development squarely on the shoulders of his superior. Management development must progress from the gimmicky procedural stage to a reciprocal, integrative, moral working relationship between manager and subordinate.

6. *You cannot base development activity on personality traits.* Men of widely divergent personalities are successful managers. Therefore, we are wrong when we appraise and select people on the basis of "traits." Furthermore, if we did establish an "ideal" manager, saying "We want only managers of this personality pattern," we would be creating a dangerous uniformity.

7. *Development should be centered around a man's present job.* If we do our development planning on the basis of a "promotion ladder," we generate restlessness, transiency, and dissatisfaction. A man should concentrate on doing his present job superlatively well, with advancement as a secondary objective, to come when and if available and earned.

■ *From an address by Moorhead Wright before the 38th Annual Meeting of the American Association of Advertising Agencies.*

EXECUTIVE FUNCTION: The measure of any man in an executive position is not how fast he can make his hands and feet go, how many conferences he can hold in the course of a day, or how many statements he can issue. Rather the measure of an executive is how free he keeps himself to consider and decide major matters. He is not in a position to make such decisions if, by doing things which subordinates could do as well, he works himself into a state of bleary-eyed exhaustion.

—Wall Street Journal

Faster Training Through "Forced Responsibility"

A METHOD OF ACCELERATING THE TRAINING of machine operators developed by the Temco Aircraft Corp. (Dallas, Tex.) may prove useful to other companies with a pressing need for skilled workers, supervisors, or technicians. The four-point Temco program relies heavily on eliminating men who lack the attitude, mental alertness, or mechanical ability to handle the job *before* training is begun. For this purpose, Temco's selection procedure includes tests specifically designed to measure these significant traits and aptitudes in all applicants.

Each trainee works half of each day as assistant to an experienced man. The other four hours are spent in classes, studying such topics as simple arithmetic, trigonometry, and geometry; blueprint reading; safety; and precision measurement. In two weeks, the trainee begins to operate his own machine, and, after five to six weeks of this combined training and practice, he is given full responsibility for his own work. From then on, his progress depends on his observation, willingness to accept responsibility, and eagerness to learn from the old-timers.

The company reports that this system of "forced responsibility" has brought to light many potential supervisors and engineers (who are singled out for further training) and has further proved its worth by developing many men of unusual versatility and ability.

—E. J. Tangerman in *American Machinist* 12/17/56

A Big Year for Profit Sharing

APPROXIMATELY 2,000 NEW PROFIT-SHARING plans were set up in 1956—nearly as many as in all years prior to 1945—according to a recent Internal Revenue Bureau report. Between 1946 and 1956, about three times as many plans were established as in the prior ten years, bringing the total to more than 10,000 plans now in existence. About 13 per cent of all office workers and 7 per cent of all plant employees are now covered by profit-sharing plans.

A Labor Department survey of companies employing more than 5.7 million workers in 17 major labor market areas indicates that the most popular types of profit-sharing plans are those deferring distribution of profits until retirement. Such plans, which cover about 10 per cent of all office workers and 5 per cent of all plant workers, usually provide for full or partial vesting rights to the profit shares after a specified number of years of participation. Other types of plans, in the order of their prevalence, include (1) those in which profit shares are distributed shortly after profits are determined; (2) those that provide for distribution of profits after a specific number of years; and (3) combination plans, which include both procedures.

—*Industrial Relations News* (230 West 41 Street, New York 36, N.Y.) 1/5/57

Corporate Directors: Legislators of Industry

SOME 600,000 corporations dominate the American economy today, and each, the law decrees, must be "managed" by directors, duly and physically assembled as a board—a historical hangover from the days when businesses were small and owners actually ran them. Obviously, no group meeting weekly or monthly can handle the day-to-day demands of the complex modern corporation. The board, as one corporation president points out, has become legislative, and "a congress cannot do executive work."

These corporate congressmen, nonetheless, still have the responsibility. Their decisions mean work for millions of employees, dividends (or, if the decisions prove wrong, no dividends) for a myriad of stockholders, orders for thousands of suppliers. And, important as they are, such votes form only part of the responsibility of the director. Today, the idea holds that the director and his corporation have to answer to the public and the nation as well.

Who are the men who must discharge these awesome responsibilities?

Directors fit into no ready-made pattern. Some (like GM's Curtice) are employees—"inside" directors. Others are outsiders—Continental Can chairman Gen. Lucius D. Clay, for example, also sits on GM's board along with Lewis W. Douglas, ex-Ambassador to Great Britain and chairman of the Mutual Life Insur-

ance Co. of New York. Directors like GM's Charles Kettering made their names in the companies they now help to manage. Others come from far afield: Actor-producer Douglas Fairbanks, Jr., now is a director of Atlanta's Scripto, Inc.

The closest thing to a common—or uncommon—denominator might well be investment banker Sidney J. Weinberg, who at one time was a director of 31 blue-chip firms, now sits on the boards of 10 companies, and gets at least one new offer each month.

Weinberg is a leading crusader in what is probably the most important conflict now agitating the world of directors—the "inside" vs. the "outside" board. As the outstanding supporter of the "outside" philosophy, he has left his mark on many top U.S. corporations. One of his beliefs, for example, is that an inside board puts company executives in the position of setting their own salaries, a subject on which he thinks few men can be impartial.

Weinberg gets strong support from men like Paul Codman Cabot, a director of Continental Can, B. F. Goodrich, J. P. Morgan and Tampa Electric Co. "An outside director," Cabot says, "is particularly valuable in bringing in a knowledge of world and economic affairs from his outside activities. Sometimes the inside director can't see the forest for the trees."

The "outside" school has some important corporate champions. General

Electric, for instance, has only two employees in its board room—chairman Philip Reed and president Ralph Cordiner.

Stronghold of the "inside" camp is the oil industry, where directors are traditionally insiders. "Unless you work full time in an industry like this," explains Jersey Standard secretary John Larson, "you can't know it well."

In the clash of philosophies, the "outside" school seems to be making progress. In 1953, the last time the National Industrial Conference Board took such a count, 54 per cent of the companies answering had a majority of outsiders on their boards. The first NICB study, in 1938, showed a score of 50 per cent.

Outside or inside, the toughest and most important job for any board, directors seem to agree, is picking executives to administer their policies and actually run the company. However, selection is only one job. The next most vital function, says chairman Cleo F. Craig of AT&T, is to "observe and check" management's performance, and to raise "pertinent questions" at meetings. And these "pertinent questions" may easily range the whole gamut of corporate activities—from multimillion-dollar expansion plans to the color of the walls in a rest room.

For the outside director (and inside specialist too), keeping up with this horizonless range of problems is a prodigious task. The "homework" demanded is backbreaking, because,

as Sidney Weinberg puts it: "The director has to know—Univacs can't run a business."

Informal contacts outside the board room—often of a social nature, over a good cigar and brandy—help directors keep up with the fast pace of industry. Most executives like to check major items with board members before they ever get on the agenda. This preflight testing, plus the homework, explains why board meetings usually run like clockwork. It also explains why top-level decisions are usually unanimous.

The criteria for selecting directors are exacting and difficult to define. Chairman Craig of AT&T says, "In a director we want character and integrity, background and experience, judgment, and qualities of leadership." Lately, companies have started to emphasize another qualification—youth, or at least relative youth. (Average age of directors in most of the firms responding to the 1953 NICB survey was 56 to 60.)

What rewards does industry offer the men who meet these rigid requirements? For the outside man, all the drudgery has to be a labor of love. Certainly the pay—an average of about \$100 a meeting—is hardly much inducement to the 90-per-cent tax bracket type of man corporations want. In Weinberg's words, a director must consider his job a "semi-public service."

■ John A. Conway.
NEWSWEEK,

January 14, 1957, p. 67:4.

HINDSIGHT is always 20-20.

—Frank Stanton (President, CBS)

Making Money Work Harder

BECAUSE CREDIT is costly and hard to get these days, there is a premium on getting more mileage out of the dollars that are already flowing through a company. Some of the smartest financial consultants in the country are being well paid to advise giant corporations on how best to conserve cash, and businesses of all sizes are studying every angle of the problem.

Corporate holdings of cash and government bonds are down to about 46 per cent of current liability, compared with 53.6 per cent a year ago. This is an average figure; in many instances it is actually lower, and this worries many business men. It might be jacked up, they think, by skillful management, but if not, companies may just have to learn to live with a lower degree of liquidity than they have been accustomed to.

Corporate treasurers generally agree that they are confronted by two basic tasks: (1) analyzing their cash flow so that accurate forecasts can be made; and (2) making special arrangements to have enough cash on hand to meet bills without borrowing.

Putting drone dollars to work is one step many companies can take to reduce the friction in their cash flow. The practice of having accounts in many different banks, for example, neutralizes some cash, since each account must maintain a minimum balance.

At the same time, a company has

to keep substantial balances in banks from which it borrows. These days, a bank is likely to want its loan customers to keep on deposit around 20 per cent of its borrowings, or even 20 per cent of a total line of credit whether entirely exercised or not. And in today's money market a company may have to seek loans from banks outside its usual credit orbit, so it can't slam too many doors.

Some companies, especially the big ones, find they can use their funds more fully and more flexibly if they cut down on the number of separate corporations of division status. American Radiator & Standard Sanitary Corp., for example, in the past two years has boiled six corporate divisions down to the parent company plus one corporate division. The funds once held by each division can now go to a central account and can be shifted around as occasion demands. "We used to operate with cash at about 10 per cent of sales," says an officer. "Now it's between 5 and 6 per cent and could go lower."

Another way companies can build up the cash in their tills is to get their receivables faster from their customers. One method is to make use of a regional payment plan like that of Bank of America in California. Customers send all checks to a central post office box in their region; the bank picks them up and telegraphs the total credit to the depositor's main account. The bank says this plan enabled one good-sized

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electrical appliance manufacturer to free \$300,000 in its over-all balance last year.

One company that found its smaller customers (also short of cash) slow in meeting their due dates has set up a credit police force. "I've taken a top-notch credit man from one of the banks," says the company's finance officer, "and his bunch is getting the laggards in line."

A big Midwestern metalworking company is trying a different tack. Its bills from suppliers come due in many cases five or ten days before payments from customers are due. The company is asking its sheet steel suppliers to shift their due dates sufficiently to allow an overlap. That could minimize a monthly dent in bank balances.

In their search for working cash, many treasurers are turning to selling their accounts receivable. Factors, or commercial financing companies, make a business of buying such accounts—for a consideration.

As important as speeding up the in-flow of funds is slowing down the outgo. Here, the most widely practiced method of freeing cash is cutting back inventory. Operations research consultants claim their mathematical analysis techniques can often cut clients' inventories by 15

to 20 per cent without impairing service to customers.

However, it can be dangerous to cut back on finished inventory if it risks customer dissatisfaction. If an important customer is also cutting inventory because of a cash shortage, he may be looking to you to keep his materials in inventory for quick delivery.

One of the methods being adopted by treasurers to conserve money is writing off depreciation on equipment at a faster rate. Another is converting some of the company's property into working capital by selling it, then leasing it back for tax-deductible rent.

In a time of rising prices, a company can save tax money, too, by appraising its inventory under the LIFO (last in, first out) method. This system of accounting makes company profits look smaller, since the cost of making a product is figured on the higher materials prices of today. Thus, taxes are lower. On the other hand, bookkeeping by the LIFO method can make profits look arbitrarily low in the year the system is adopted. And if prices should happen to go down, LIFO backfires as a means of retaining capital.

■ BUSINESS WEEK,
February 9, 1957,
p. 112:4.

ABSENCE CHECK: At the First National Bank of Boston, an employee fills out an absence slip every time he has been out for any reason at all except for vacation. The department manager, not the employee's immediate supervisor, must approve the slip and talk things over with the returned absentee. Since the inception of this procedure, the absence rate has slowly but continuously declined.

—*Supervisor's Personnel Newsletter* (60 West 55 Street,
New York 19, N. Y.)

Financing SUB Through Profit-Sharing

FINANCING SUPPLEMENTARY UNEMPLOYMENT BENEFITS is still a major hurdle for the small and medium-size company, but one company (Leeds Northrup Co., Philadelphia) has solved the problem by tying benefits to profits. To build up the benefit fund, the company contributed \$50,000 in 1940 and \$100,000 in each of the next three years. Starting in 1945, its contributions to maintain the fund were fixed at 2 per cent of available net earnings. As of June 1, 1956, the fund totaled \$958,977, an average of about \$320 for each of the company's 3,000 employees.

"Financing an unemployment benefit fund from profits," says J. C. Hess, Jr., vice president in charge of industrial relations, "means the fund is built up during good years when profits are high. Then, in the lean years, there's protection for both the employee, who might be laid off, and the company, which might not be able to maintain a high fixed-cost contribution."

—Steel 1/14/57



"Jackson's having labor trouble. They want him to work."

Office Automation: Realizing the Full Potential

AUTOMATION, dismissed by many a few years ago as a will-of-the-wisp, is a fairly commonplace element on the business scene today.

As a means of performing existing tasks at tremendously greater speed, it has been accepted wholeheartedly by industry.

Not nearly so well understood or accepted is automation's more significant possibilities as a system of doing things which makes obsolete not only many old work methods but may enable companies to dispense with many of the end results that used to be thought essential.

For example, in the case of reporting techniques involving figures, it has been conventional practice to base operating reports on exact totals, scrupulously carried through to the last dollar (more often the last cent), the last item in the warehouse, the last unit shipped. Traditionally, reports have been based on exact totals, and consequently all the supporting routines for these reports were geared to getting and checking exact figures.

But now automation offers us two possibilities: projecting from samplings by means of statistical inference, and providing operating reports so much faster than conventional methods that reports can in effect be almost continuous if the supporting and originating routines on which they are based can be carried out fast enough. Obviously, the supporting routines can be carried out faster if they do not have to be absolutely

precise—if, instead of exact totals, they can employ samplings.

In other words, automation—in the sense of extremely fast processing of facts and figures—can provide what is in effect almost a continuous stream of operating information. It can show any major phase of a business as it is at the moment, not as it was at some past time. Automation can, so to speak, show a motion picture of the company, rather than the still picture traditional reporting methods have provided. A moving picture is not as precise nor as detailed as a still picture, but it can be a lot more effective in telling a story, and most managements would probably find it more useful.

Before automation can be fully exploited, many of our traditional accounting and reporting standards may have to be analyzed and revised. All the speedy data-processing machinery in the world cannot produce results at a faster pace than the slowest link in the chain through which those data must pass. If we are to use sampling techniques and statistical inference to arrive at checks on company operations, operations research will doubtless be needed.

A company might, for example, decide to apply automation to its inventory control operation. It could simply set up an automatic reporting system connecting all its warehouses, process all figures received on a computer, and, by giving manage-

ment daily figures on all items in store the preceding day in every warehouse across the country, maintain that it had automated the inventory reporting process. But management would still have to scan all the figures and take corrective action if any inventory seemed too low or too high.

The company might, however, go a step farther. It might set up maximum and minimum safe limits on every item kept in its warehouses, and have the computers programmed to report out only the figures for those items in which stock levels had dropped below or climbed above the safe limits—i.e., figures which call for corrective action.

Now suppose the company goes one step farther and builds into a simple operating routine, programmed into the computer's memory, the actions that should be taken by various departments of the company whenever totals for any item fall outside safe limits. Then the computer would not only recognize deviations

from the desired levels, but would also initiate automatic corrective action to clear up the deviation. This would constitute true automation of the inventory reporting process.

Such a degree of automation would, of course, almost inevitably involve some reliance on operations research techniques.

Pure automation is now becoming possible. And as it becomes possible, new trends which today are barely discernible will become very obvious. Gradually, management is being relieved of the pressure of day-to-day operating decisions; its decisions are concerned more and more not with next month or next year, but with the position of the company 15 or 20 years in the future. It is becoming at least theoretically possible for the company to run itself to a degree, once its course has been charted. It is the charting of the course ahead that is fast becoming management's prime responsibility.

■ OFFICE MANAGEMENT,
February, 1957, p. 27:11.

The Executive Bonus

IT USED TO BE that when an executive was called into the boss's office and handed his first fat bonus check, he could consider that he had really made the grade. The bonus seemed to say something pretty nice, in its clear, arithmetical way, and it generally stimulated a manager to do even better next year. Bonuses are still conveying their pleasant, reassuring messages to executives, and the

old ritual of secrecy ("Keep this to yourself, Bill") still persists. But as companies have grown larger, the bonus-awarding process has, in many companies, become elaborate and institutionalized. A variety of formulas has been devised for figuring out how much of a bonus shall be given, and to whom. Payments have been ingeniously arranged to tie good managers to the company, and to minimize tax

liability. Yet some executives think the bonus may no longer be serving its intended function, and top management is probably doing more thinking about bonuses than it has in years.

Most bonus committees might agree that in theory a flexible, discriminating executive-bonus system is an extremely useful device for spurring management to peak performance; and that bonuses have certain distinct advantages over other forms of special compensation—e.g., bonus awards can be reviewed annually whereas stock options once awarded cannot be altered. But most bonus committees would also recognize that there is a widening gap between theory and actual fact in the matter of bonuses—which may be why many companies have recently altered their bonus policies.

McKesson & Robbins, Inc., for example, has installed a new bonus plan involving a three-level management recommendation system to make its awards discriminating, i.e., a reflection of individual performance.

Alco Products has reduced the number of executives participating in its bonus plan by 74 per cent, limiting participants to policy makers.

Textron, Inc., has decided to relate the bonus awards of some of its divisions to divisional return on capital rather than to sales.

Koppers Co., Inc., has adopted a bonus system of "unit" shares (instead of stock shares) that can be cashed in after retirement for an amount equal to the increase in market price of Koppers' stock since the time the award was made.

General Motors Corp. is considering the possibility of deferring

some bonus payments until retirement and of changing the formula that determines the size of G.M.'s total bonus fund with a view to reducing it somewhat.

While many companies think their current bonus-award procedures need to be improved, more than half the companies in the U. S. apparently are not convinced that the bonus is an essential management incentive at all. Recent surveys have shown that about 45 per cent of all companies now pay bonuses; back in the 1920's, by contrast, about six out of ten companies awarded bonuses, some of which were enormous.

One of the two major criticisms of bonuses is that they cannot be accurately related to an executive's contribution to company success. The other main criticism, usually made by companies that have abandoned bonuses, is that bonuses soon come to be considered by executives as a regular and permanent addition to salary. At first, this argument goes, a bonus plan may serve to motivate managers to do their best, by rewarding them for outstanding performance; but this function disappears when companies regularly hand out extra rewards that bear a direct relationship to salaries and rise gradually from year to year. This is particularly true if the awards are not reduced even when an executive turns in a mediocre performance.

Meanwhile, as more and more fringe benefits have been granted that might conceivably be counted as incentive compensation to executives, bonuses have themselves tended to lose some of their incentive value.

Most corporate bonus plans today

are arrangements in which individual awards are left to the discretion of a few officers and directors. In some plans, individual awards are determined according to formulas, based usually on sales or profit quotas worked out for different corporate divisions. In nearly all big corporations, however, the size of the bonus fund is limited to a fixed percentage of profits remaining after deductions for return on capital, or dividend payments.

Measuring an executive's contribution to corporate success is one of the most difficult jobs in management. Indeed, many executives think that even an approximately accurate measurement is impossible to make, and that at best a bonus can only reflect the subjective guess of top management. But the search for usable criteria goes on.

General Electric, for example, has been testing many appraisal systems, and its top management has told supervisory managers that in awarding bonuses they should consider not only current profit performance but seven other factors, ranging from a manager's contribution to "market position" and "productivity" to his sense of "public responsibility." G.E.'s top management hopes that in trying to apply these criteria managers will become more objective about the overall performance of their subordinates.

On the other hand, some companies have found that performance criteria can be too "objective." "The

biggest mistakes we have made on bonuses," says Westinghouse's Executive Vice President Mark Cresap, "were the result of trying to be too specific in the application of rigid formulas."

Next to a generous pension plan, one of the most effective means for tying executives to a corporation is a bonus plan with deferred payments. This objective is readily visible in General Motors' plan, which stipulates that each manager's yearly bonus award will be paid out in five annual installments. The plan provides that those "who are dismissed for cause" forfeit the unpaid portions of their bonuses; those who "voluntarily terminate their employment" also lose out, "unless the Bonus and Salary Committee decides otherwise."

So long as executive bonuses do not heavily dent corporate earnings and dividends, the great majority of stockholders of bonus-paying companies are not likely to object to the continued use of this carrot for executives. They will, however, welcome management's efforts to make bonuses less automatically accessible to the mediocre executive and more compatible with the able executive's actual contributions to corporate success. But until more companies succeed in justifying their bonuses on that basis, the companies that do not pay them are likely to remain in the majority.

■ Perrin Stryker. *FORTUNE*, December, 1956, p. 127:10.

PEOPLE FORGET how fast you did a job—but they remember how well you did it.

—Howard W. Newton

Miniaturization: How to Get Bigger by Growing Smaller

BUSINESS MEN ARE LEARNING to accomplish more and more with ever-smaller, but enormously more efficient, machines.

This miniaturization trend has brought the greatest rewards in electronics. In place of old-style vacuum tubes, science has developed miniature tubes and tiny transistors no bigger than a shoelace tip to perform most of the same functions. Electric motors have shrunk to the size of a man's thumb, delicate gyroscopes to the size of a bottle stopper.

Thus far, miniaturization's greatest advances have been the result of military necessity. "Without miniaturization," says Rear Admiral Rawson Bennett, Chief of Naval Research, "much of the electronics equipment now in ships and planes and many of the Navy's newest weapons would be impossible." Miniaturized computers, radar sets, fire-control mechanisms, and radios are the heart of every U.S. jet bomber and fighter.

In automation, miniaturization makes possible the tiny servomechanisms, (i.e., electronic brains) which, built into machines, direct all their operations and automatically correct their errors. In the opinion of Dr. Cuthbert C. Hurd, Director of Applied Science for International Business Machines, "If we didn't have miniaturization, we'd soon have plants measuring ten miles by ten miles."

Dozens of industries are already well aware of the lesson. To handle the vast increase in telephones and calls, for example, American Telephone & Telegraph Co. must make its equipment smaller or choke on its own wires. The complex long-distance "carrier" equipment once filled a 20 x 30 ft. building; this year, telephone companies have cut the carrier to the size of a kitchen icebox and will soon have one for rural systems as small as a police call box.

—Time 11/19/56

Aid to Education—How Industry Picks Its Schools

WHAT DOES A COMPANY look for in selecting an educational institution to receive financial aid? The most decisive single factor, according to a recent survey of 81 companies by the Council for Financial Aid to education, is the general caliber of the school. Next in order of importance come accreditation and academic excellence, followed by geographical proximity of the school and the existence of a technical or professional program.

Other frequently mentioned considerations, in the order of their relative importance to the companies surveyed, include the quality of the school's leadership, whether it is privately controlled, and whether it has (1) a liberal arts program, (2) facilities for postgraduate or research specialization, (3) a sound long-range development program, (4) sound financial management, and (5) a university program.

Equipment Replacement and Depreciation: A New Survey

CAPITAL GOODS COMPANIES are paying much more attention these days to equipment replacement policy, judging from the results of a recent survey conducted by the Machinery and Allied Products Institute among 296 companies across the nation. Back in 1948, only 28 per cent of such companies participating in an MAPI survey vested specific responsibility for equipment replacement studies in a particular individual or staff, as against a current figure of 54 per cent.

The survey findings show an even more remarkable upswing in the practice of regularly reviewing equipment to determine possibilities for improvement and modernization. In 1948, only 35 per cent of the respondents had such a program; the new survey shows that this figure has more than doubled, to 79 per cent.

In the area of depreciation policy, the survey revealed a significant shift to the new methods of depreciation provided by the Internal Revenue Code of 1954: double-declining-balance and sum-of-the-digits. Although the old straight-line method, used by 36 per cent, is still the most popular, the declining-balance method is preferred by 31 per cent and the sum-of-the-digits by an equal percentage. A sizable majority (74 per cent) felt that current methods of distributing depreciation over the service life are adequate. However,

some 40 per cent mentioned a number of specific ways in which present tax depreciation methods could still be improved, including a more liberal policy with respect to service lives and depreciation rates, and a purchasing-power adjustment in tax accounts to compensate for under-depreciation resulting from inflation.

Aside from the shift to new tax methods, depreciation policy in general seems little altered since 1948. As was the case then, only a tiny minority (15 per cent) have any regular procedure for reappraising the remaining life of equipment and revising depreciation rates accordingly, while only 12 per cent tie depreciation charges to variations in use. However, there has been a substantial increase—from 19 to 34 per cent—in the practice of earmarking depreciation accruals for the purchase of new equipment.

On equipment replacement methods, the survey showed that in most companies (61 per cent) initial recommendations for re-equipment outlays are made by superintendents, works managers, or department heads. In 14 per cent they are made by engineers or master mechanics, in 13 per cent by top management, in 7 per cent by foremen, and in 5 per cent by others. The final decision on re-equipment outlays is made by the president or chief executive officer in 65 per cent of the companies, by the

board of directors or executive committee in 30 per cent, and by others in 5 per cent.

The short pay-off requirement is still the most widely used analytical method for equipment replacement, with 42 per cent favoring this device. For replacement equipment with a service life of 10 or more years, the most popular pay-off period is five

years (34 per cent) with three years next (28 per cent).

Significantly, an increasing number of companies are employing replacement formulas rather than rule-of-thumb procedures. Nineteen per cent said they use the MAPI method, 8 per cent the minimum-average-cost method, and 1 per cent the discounted-cash-flow method.

Needed: A Philosophy for Corporate Giving

WITHIN THE PAST two decades, the business corporation has risen to the status of a public benefactor through the practice of philanthropic giving. Most observers seem to think that the 5 per cent clause in the Internal Revenue Code amounted to an open invitation to business corporations to join the ranks of philanthropic donors.

If the invitation had been accepted without reservations, the flow of funds into American philanthropy from corporate earnings would have exceeded \$2 billion in recent years. In fact, it has been only a quarter of this amount at most, and some have predicted that the figure will probably level off to something like a half-billion dollars a year. Still, this is an impressive sum, and it raises the question of a basic philosophy in the whole field of corporate giving.

We need a thoroughgoing rationale for corporate giving, for many reasons. There is the legal question of corporate authority to engage in this new activity. There are reasons of

business policy: the need to explain to all the various interests bound up with corporate enterprise why corporate giving makes sense. There are political reasons: the need for explaining to the public why corporate giving is legitimate and useful to the body politic. And the immediate need within corporate management itself is obvious: a contributions policy is a necessity as a selective instrument in guiding the day-by-day decisions on the multitude of requests for gifts.

One of the long-range trends that affects the rationale of corporate giving is the historic tie between the corporation and the state. Many corporate donors today rely to a large degree upon the advice of legal counsel in deciding who are to be the recipients of the contributions budget. In fact, a major criterion for screening applicants is the Cumulative List of Organizations drawn up by the Treasury Department. This list tells us who is tax exempt and who is not. The decision-making on this crucial question of allocation of gifts has

thus been transferred to Washington, since corporate giving, in general, is tied to tax expediency.

Moreover, the authority to make corporate contributions is not generated in the corporation itself—it is a grant that may be made or withheld by the state. During the past few years, of course, the state has shown increasing leniency toward the corporation in the matter of philanthropic giving. Most of the state legislatures have enacted permissive legislation that widens corporate powers over giving, and the older common-law doctrine of “direct benefits” has been relaxed to a degree. But to extrapolate the future curve of public policy on this subject only on the basis of these recent developments would be hazardous in the extreme. The autonomy of corporate action is still carefully hemmed in by public policy. The state keeps a watchful eye on corporate affairs.

The second trend that directly affects the rationale is the developing doctrine of free enterprise as seen by the corporate enterprisers themselves. If, for example, the major objective of the business is to maximize its profits, while all other considerations are by-passed, it would be difficult to justify corporate contributions that yield no demonstrable returns on the balance sheet in the foreseeable future. But because, for the larger corporate enterprise, a major objective is to strengthen the environmental factors on which the future of the business depends, the available field for corporate giving widens considerably.

Corporate support payments must

be regarded as a prudent investment of corporate assets for new and different purposes, but still for good business reasons. What these new and different purposes should be, if they are justifiable by good management standards, can be discovered only by a penetrating analysis of relations between contemporary corporate enterprise and society.

To support those vital private sectors that make for a free and pluralistic society, a company's gifts should be carefully allocated with the following considerations in mind:

1. Corporate assets cannot properly be disbursed as charity. Rather, they are a prudent investment of corporate assets in well-selected philanthropic, educational, and scientific organizations. This particular kind of investment often turns out to be the best way to reach some of the company's objectives.

2. Among the most important of these objectives is the survival and prosperity of the corporation in a political and economic system that encourages the autonomous enterprise unit. Corporate giving should aim directly toward the strengthening of such a system.

3. But since the system itself must be pluralistic in character, with a high degree of autonomy for many kinds of enterprises—economic and other—and with a wide diffusion of decision-making at a multiplicity of centers, corporate giving must deliberately aim its shots at those dangerously weakened, vital, private sectors whose well-being is directly or indirectly related to the success of enterprise itself. These private sectors

constitute all the areas of meaningful human activity apart from public government: the family; the local community; indigenous welfare groups; private schools, colleges, and universities; associations of scholars, scientists, writers and artists; indeed, the whole spectrum of voluntary associations through which men hope to achieve their goals.

4. The corporate donor must eschew all temptations to control or direct the internal administration of

beneficiary organizations, for a free society depends on this autonomy.

5. Finally, in selecting the vital sectors to be supported, preference should always be given to those which help to liberate men from the restrictive forces of ignorance, fear, and coercion.

■ *From an address by Richard Eells (Consultant on Public Policy, General Electric Co.) before the National Industrial Conference Board's Management Seminar on Company Contributions.*

What Government Spending Means to Industry

THE FEDERAL GOVERNMENT is spending budget funds at the rate of more than \$5½ billion a month—more than seven times faster than budget disbursements of only 16 years ago. With more than \$3 billion a month—60 per cent of the budget total—being spent on “major national security,” it is clear that a substantial portion of these expenditures go directly into industry, for production of military goods and for research on weapons and related products.

Even when the U.S. sends aid abroad, business at home feels some beneficial results. A recent report from the International Cooperation Administration discloses that about 77 per cent of the \$30.4 billion of foreign aid expended since 1948 went for goods and services purchased in this country.

In addition to federal spending for security and defense, there is continuous expansion in government services to commerce, industry, and individuals in the form of subsidies, grants, benefits, and loans. Veterans' services and benefits, for example, totaled more than \$4.7 billion in fiscal 1956. Old Age and Survivors Insurance came close to \$5.4 billion, with monthly payments 24 per cent higher in total than in the preceding 12 months. This means that, at the end of last June, 8.4 million persons were receiving OASI benefits at the rate of \$14.6 million per day. Federal loans in aid of agriculture stood at \$6.7 billion and loans to home owners at \$3.2 billion at the end of 1955.

In short, our economy is adjusted to far more financial support from Washington than anyone could have foreseen in the 1940's, and we can expect a further gradual growth in the influence of federal expenditures on trade and industry.

—*The Biddle Survey* (Biddle Purchasing Co., New York) Vol. 25, No. 11

Increasing the Payoff from Suggestions: One Company's Method

SHOULD THE SUCCESS of a suggestion system be measured solely by the number of ideas submitted by employees? One large company—American Airlines, New York—doesn't think so. It has completely overhauled its suggestion program to cut down on the small, insignificant ideas and encourage the bigger ones that will contribute substantially to savings, increased revenues, and improved customer service.

During the first three months of operation under the new system, participation has been cut about one-third, but the average award has risen from \$18 to \$45.

To be eligible for an award under the new system, a suggestion must have an application beyond the normal work assignment of the employee. For example, a clerk in Revenue Accounting may develop a revised procedure for handling lost-ticket claims that eliminates a considerable amount of correspondence and forms. Although the suggester works on ticket claims, he is eligible for an award, since he is not assigned to set up the procedures.

The minimum award has been hiked from \$10 to \$25 and the maximum has been set at \$10,000. Since awards are equal to 10 per cent of the suggestion's estimated net value during the first year of use, ideas must be worth more than \$250 in order for employees to be eligible for immediate cash awards. Awards

for acceptable ideas worth less than \$250 are credited toward the minimum.

The company defines eligible suggestions as those "that contribute to savings, increased revenues, and improved customer service." Normally, such suggestions are measurable in terms of dollar savings. Some, although measurable, are not eligible for cash awards. These include the following:

1. Suggestions to install new equipment that the company is aware of, but for the various reasons has not yet decided to install; also suggestions on known methods of adjusting new equipment.
2. Suggestions on items already under consideration.
3. Proposals that seek to correct simple operating faults or a condition caused by the failure of an employee to perform an expected or assigned duty.
4. Suggestions regarding personal tools and tooling aids.

Certain types of unmeasurable suggestions are eligible for awards—safety ideas and a few others that department supervisors feel have real merit. But many types of unmeasurable ideas are ineligible for awards, including (1) suggestions requesting requisitionable items; (2) ideas proposing a periodic or routine improvement; (3) suggestions involving personal conveniences for employees; and (4) helpful hints, such as are

normally exchanged between personnel on working methods.

Overhauling the suggestion system was a logical offshoot of an over-all company reorganization that took place two years ago. Operations were decentralized, and operation of the suggestion system has become a local "line" responsibility. Regional personnel offices screen all suggestions orig-

inating in their particular areas and take appropriate action, while general office personnel in New York now handle only those suggestions that have to be investigated for their system-wide impact.

■ EMPLOYEE RELATIONS BULLETIN
(National Foremen's
Institute, Inc.), No. 547,
p. 10:3.

Managing Research & Development: Some Problems and Pitfalls

ONE OF THE MOST perplexing new problems in modern business is the management of research and development. There are no real precedents in this area, and the rules of the game are only just being outlined. No one is quite sure what they are, or ought to be. And the need is growing for efficient management of this activity.

What kind of people are needed to administer R & D? The practice has been to take technical men who seem to have a flair for administration and make them directors in research departments. Basically untrained in administration, they are forced to learn as they go along. Some never do.

One recent development has helped meet this problem to some degree. A so-called "business manager" has been created who acts as a kind of traffic cop for project administration, thus relieving the technical director of some administrative detail. But this post is still a rarity in R & D

departments generally; and in small-scale R & D efforts it is not practical because of the expense.

Quite apart from the matter of subordinates' respect, there are compelling reasons for picking a scientist as research director. One of his principal tasks is the design of projects and of experiments. A carefully and creatively conceived design can save money and time, and increase the chances of success; a poor one can complicate an already complicated operation. Furthermore, the director ought to be a person who can ask the right questions, can see the implications of the work of his group, and can develop new approaches to old problems.

Unfortunately, scientists-turned-administrators often fail to realize that human problems cannot be handled in the same way as problems in physics or chemistry. In sum, the administrator ought to be a scientist, but the scientist is not necessarily a good administrator.

This dilemma becomes even more acute in the relationship between the technical director and management. For the scientist-manager is literally in the middle, caught between the demands and requirements of his unique supervisory group and the needs of the firm. Thus he must be a man with a commercial sense, a man who can develop rapport with all departments in the company from advertising to production, a man who can translate the objectives of the business to the scientists and the attitudes of the laboratory to the executive, a man who can explain and sell the role of research to top management and the directors.

In addition to administrative problems, there are these basic operating problems involving R & D:

Communication. Friction and poor performance can often be traced back to the failure of technical people to understand or be understood by management. Both are inexperienced in the other's field; they have been trained differently and are oriented differently.

How can this breakdown be repaired? At the simplest level, some companies have "translators," who are assigned the task of putting technical reports into nontechnical language.

Bulletins, memoranda, company journals are all helpful, too, and better than nothing. But for a basic solution, organizational machinery should be designed to stimulate the face-to-face communication which is indispensable. The technical director should meet regularly with top management, and be considered a working member of the senior group in

the company. In many instances, R & D troubles stem from a failure on the part of managements to think through, articulate, and discuss their objectives.

One of the difficulties here lies in the unfamiliarity of most executives with different kinds of research and the output from these approaches. They do not appreciate the difference between technical service and engineering; between pure research and commercial development.

Management uncertainty. Often, executives feel uncomfortable about determining solutions to administrative problems which involve technical people and facilities. High on the list of objectives for business education should be the training of managers who understand the workings of science sufficiently so that they can make sound decisions on research policy.

Evaluation. Experts stand far apart on this thorny problem, some maintaining that R & D simply cannot be objectively evaluated when you get beyond the technical service and engineering area, while others are busily working out and testing various formulas.

The tangles in any attempt to assign credit for R & D's contribution, much less to put a price tag on it, can be highly frustrating. What happens if research turns out a good product, but the line muffs it? What happens if the sales force fails to capitalize on all the aspects of a good item? At what stage in the process do you start to give the engineer credit for his suggestions in the development of a product?

Many different evaluation techniques are being used. Some companies measure the cost against gross sales, and seek to hold it to some percentage figure; others break it down by project. One firm may credit R & D with all the profits for a specified number of years on its output; another is working on complex techniques designed to measure the quality and quantity of knowledge coming out of the laboratory.

Too much is at stake to get along

without some criteria—to depend on nothing more tangible than confidence in the technical and administrative skill of the research chief. So the effort to rationalize the evaluation of R & D is certain to continue. In the meantime, individual companies must organize the activity so results can be compared at least broadly with objectives.

■ ACME REPORTER (Association of Consulting Management Engineers, Inc.) No. 4.

How Many Dollars for Research?

THE AVERAGE AMERICAN COMPANY dependent upon technological developments should spend about 5 per cent of its sales for research if it is to keep up with competition, in the opinion of Dr. Haldon A. Leedy, director of Armour Research Foundation of Illinois Institute of Technology, Chicago. He pointed out at a recent industry conference that the average U.S. company spends only about 1 per cent of its sales for research, with expenditures ranging from less than ½ per cent in the nontechnical industries to 9 per cent in the more scientific industries.

More than 50 per cent of all products currently being manufactured can be traced directly to results emanating from some research laboratory, according to Dr. Leedy, and the majority of the remaining items either have been improved or require fewer man-hours to produce as a result of research and development.

One of the most important and dynamic reasons for our economic growth is the unprecedented rise of organized research and development, and companies that neglect it may find themselves left behind in the competitive race for larger markets and higher profits.

NATIONAL PACKAGING CONFERENCE AND EXPOSITION

The 26th National AMA Packaging Conference and Exposition will be held Monday through Thursday, April 8-11 inclusive, at the Amphitheater and Palmer House, Chicago.

Winning and Holding Profitable Markets

IF IT IS TO ATTRACT, serve, and finally "own" a market, no company can afford to neglect certain basic marketing principles.

The first of these is that only a fully integrated marketing program can achieve maximum success. In implementing such a program, every decision should be based on all the facts that can be assembled, and these facts should be as accurate and complete as it is possible to make them. Most companies already have in their records a wealth of information on their past relationships with consumers of their products. Having taken past experience into account, an integrated marketing program must then project itself into the future on the basis of market forecasts—both short- and long-range—providing a comprehensive picture of the business climate in which it will operate. Each business must analyze and forecast its own specific place in the economic picture.

The second important marketing principle involves the price we obtain for our products. The only right price is one fair to seller and buyer alike. For the seller, this means a price which will permit him to recover his costs and make a reasonable profit. To the buyer, on the other hand, a fair price implies freedom from discrimination. It means that every buyer purchasing from a particular supplier under a particular set of conditions pays the same price.

The third principle is that there

is no such thing as a one-time buyer for any product. Any marketing approach, whether the product be consumer or industrial, is faulty if it treats customers as though they will never come into the market again. Yet in many cases a sales objective is confined to booking the order, rendering the invoice, getting paid, and moving on to the next prospect. Every company should make certain that its sales objective contemplates a continuing buyer-and-seller relationship and that this objective is not only known, but clearly understood, sincerely accepted, and actively pursued at every level of organization.

The fourth principle is that the sale has not been made and the seller's responsibility finally and completely discharged until the product has moved through all the channels of fabrication and distribution into the hands of the ultimate consumer. No manufacturer has a right to dump a product into the distribution system without providing adequate facilities to make certain that the satisfaction promised when it was sold is attainable.

In our advertising, in our promotion, in our selling presentations, we sell a standard of performance as well as the product itself. We cannot properly excuse the failure of an individual unit to meet this standard by explaining that this particular product is below average. The entire organization—not marketing alone, but production, research, engineering,

and finance—must accept this principle, or it cannot be effective.

Vital though they are, these four principles are transcended in importance by a fifth: The most effective marketing operation will be one that succeeds in applying sales effort through the entire distribution channel. A good selling job at the point of the initial sale is not enough, for this may result in clogging the distribution pipeline with unsold inventories. A truly effective program sells at every point, down to and including the ultimate consumer, so that each item entering the distribution pipeline at one end moves out rapidly at the other.

Today, after 10 years of high employment and almost insatiable demand for many products, some companies have come to feel that the marketing function can safely be relegated to a secondary role, and that it has but a limited part to play in the future. This is a short-sighted view. The day may not be far distant when the marketing men will once again have to shoulder the heavy responsibility of sustaining our American economy in high gear.

■ *From an address by David F. Austin (Executive Vice President, United States Steel Corp.) before the 61st Congress of American Industry.*

Solar Energy: New Tool for Industry

POWER FROM THE SUN, which has already been put to work heating buildings in New Mexico, generating electricity for rural telephones in Georgia and operating water heaters in Florida, is taking on some new tasks.

Industry employs the sun's energy—caught in solar furnaces—as a valuable new research tool for aircraft, guided missiles, copper smelting, ceramics, and atomic energy. And before many years the sun's rays may be heating homes, cooking food, powering radios, and converting sea water to fresh water. Some of these things have already been done experimentally or on a small scale.

Industry's present main interest

with solar energy centers on the solar furnace, a device that concentrates heat from the sun on a very small area in the same way that children use a magnifying glass to burn wood. In solar furnaces, scientists can produce and control temperatures of more than 6,000° Fahrenheit, about 60 per cent as hot as the surface of the sun.

The solar furnace is today anything but a laboratory toy. "Industry has a tremendous interest in the solar furnace as a cheap and easy way to get high temperature for research," according to Dr. Peter Glaser of Arthur D. Little, Inc. (Cambridge, Mass.).

Lockheed Aircraft Corp. testifies

to the usefulness of its \$1,000 home-made solar furnace. "Our research with the furnace has completely changed the design of a research vehicle," says Freeman Hall, a Lockheed physicist. "If we hadn't had the furnace, we'd have had to build a test vehicle at a cost of several hundred thousand dollars only to find it wasn't satisfactory. Even in the Los Angeles smog we can get temperatures of 5,000° Fahrenheit."

The searing heat from a solar furnace is helping General Electric work out the design for the nose cone section of an Air Force intercontinental ballistics missile. "With the furnace," explains G.E.'s Joseph Farber, "we can simulate some of the high heating rates you'd encounter in bringing a missile back into the atmosphere."

And Kennecott Copper Co. hopes its solar furnace, atop a University of Utah building in Salt Lake City, will lead to improvements in copper smelting techniques, or even a major new process. Initial results are promising, says W. Marvin Tuddenham, the company's furnace man.

Although the solar furnace is a precision instrument, it is a simple device. Typical furnaces have only four basic parts: a concave mirror to concentrate the sun's rays; a heliostat, usually a flat mirror set up to reflect rays into the concentrating mirror; a temperature control, made in the shape of a Venetian blind or a camera diaphragm; and a "work holder" to grasp the substance being heated. The area heated is small—about one-quarter inch in diameter.

Electric furnaces produce tempera-

tures as high as those achieved in a solar furnace, but the sun-powered device has several advantages for researchers. A solar furnace's temperature can be varied by hundreds of degrees in a fraction of a second. The solar furnace produces "clean heat," with no by-products of combustion that might interfere with precise studies. And material heated in a solar furnace doesn't rest on a metal surface, thus eliminating unwanted chemical reactions. But there's one obvious drawback: solar furnaces won't work unless the sun is shining.

The next major use of solar energy will be to heat homes and water, says John Yellott, executive director of the Association for Applied Solar Research. Heating is done with a "flat-plate collector," a metal plate with tubes through which water or some other fluid flows. This plate is covered with glass or plastic. When the sun hits the plate, the "greenhouse effect" occurs, heating water in the tubes. The hot water can be used to heat the house.

The most important application of solar energy may be the conversion of sea water into fresh water, along with recovery of minerals from the sea, states Dr. C. C. Furnas, U.S. Assistant Secretary of Defense for Research and Development. "Besides fresh water," he points out, "you'd use solar energy to extract maybe 10 minerals such as bromine, magnesium, copper, gold, silver, chromium, and vanadium. By combining these, you might make the process economically feasible."

Though the principle of producing

extreme heat by concentrating the sun's rays is ancient, the solar furnace is a relatively new device. In 1954, there were only two or three in use in the United States, according to Mr. Yellott. "Today there are

at least 25, about three-fourths of them in industry," he adds. And many more are contemplated.

■ *Ed Cony.*
THE WALL STREET JOURNAL,
January 25, 1957, p. 1:2.

Picking the Right Typewriter for the Job

IN SETTING UP COMPANY POLICY on the purchase of typewriters, the office manager must weigh the relative merits of electric and manually operated machines. Here are a few pros and cons that should be considered:

☛ The appearance of work done on an electric typewriter is undoubtedly superior to that of the manual, but this quality may not be required in all cases.

☛ The electric machine will produce a greater number of legible copies and is unexcelled for preparing stencils and master copies; again, however, the job involved may not require a heavy amount of multicopy work.

☛ Electric machines reduce the amount of fatigue experienced by the operator. Since these machines are noisy, however, the fatigue element may be transferred to persons doing dissimilar work in adjoining offices, who may be forced to speak more loudly and listen more attentively.

☛ The use of electric typewriters may have some advertising value, owing to the prestige that comes with owning and operating such a machine.

On the disadvantage side, the price of electric machines averages \$420, as opposed to about \$210 for manual typewriters. In addition, the possibility of malfunction is greater with electric machines, and more frequent service calls may be required.

The expense of setting up or relocating a typing station is greater with an electric machine. The necessity of providing an electric outlet reduces flexibility, and dangerous situations occasionally result from the use of extension cords.

The executive considering these pros and cons may find the policy of the Carrier Corp. (Syracuse, N.Y.) helpful. Carrier suggests the use of electric machines when the typing station involved consistently meets one or more of these requirements for at least five hours a day: (1) prepares executive and sales correspondence requiring a high degree of uniformity; (2) types material for which numerous copies are consistently required (i.e., eight or more); (3) prepares master copies for duplicating machines, especially when special type faces are required.

—John C. Carroll in *Office Executive* 1/57

Labor-Management Disputes: An Arbitrator's-Eye View

LABOR ARBITRATION—one of the newest and smallest professions—is now the final step in the grievance machinery of 90 per cent of all collective bargaining agreements in the U.S. During 1956 alone, a small group of arbitrators made peace in some 10,000 disputes between management and labor.

Since arbitration is voluntary, every decision an arbitrator issues becomes a measuring rod for his selection in the next case. Unlike a baseball umpire, his working-life expectancy can be set by either or both of the antagonists whose disagreements he is asked to resolve. Nevertheless, the National Academy of Arbitrators' latest roster of members—numbering about 200—shows that most of the same men who were arbitrating 10 years ago continue to handle the lion's share of cases today.

There are probably two main reasons for this:

1. Arbitration has become a finely ground tool of industrial relations whose strengths and limitations are thoroughly understood by its practitioners, including the representatives of both sides. The fear of the unknown has largely been eliminated.

2. The skilled arbitrator not only understands the limits of his authority but generally brings in an award which, even if unsatisfactory to one side or the other, falls within the range of what the parties reasonably anticipate.

Companies and unions now know that honesty and impartiality in an arbitrator are not enough. A thorough understanding of industrial relations and the arbitration process, too, is necessary.

Labor and industry have devised a number of safeguards against rash arbitration decisions. The chief one is the limitation of arbitration to disputes that arise under the contract. The contract will almost always provide that arbitration must be limited to such claims and that the arbitrator shall merely interpret and apply the agreement, with no power to add or to subtract from it.

The settlement of grievance disputes through arbitration is almost universally accepted and the process is well developed. It includes: (1) skilled arbitrators with a professional association of their own; (2) company and union representatives who know the process; and (3) a private nonprofit administrative organization to help select arbitrators and provide facilities for hearings. This organization, the American Arbitration Association, also helps develop ways to make arbitration even more effective.

Despite smooth-running arbitration machinery, the process is not automatic. The individual arbitrator is still the key to a sound award. And his job, despite the safeguards, requires far more judgment than merely the ability to measure the facts of the

dispute against the yardstick of the contract.

Take, for example, the most frequent type of dispute submitted to arbitration: discharge or suspension of an employee. The contract will usually say that the company has the right to discharge or discipline for "just cause." But what is "just cause"? In general, it is an infraction that companies and unions have come to regard as serious enough to warrant disciplinary action. But this does not add very much specification to the normal contract clause.

In addition, "just cause" for discharge varies with both the circumstances and the industry. A man who uses rough language with his supervisor at the blast furnace may be completely inoffensive. But milder words in the front office may be highly insubordinate.

Discharge cases are particularly sensitive, because the stakes are high. These days, when seniority and pensions are important property values, discharge is often a most serious

penalty for the individual. On the other hand, if an employee is reinstated after being charged with an offense which the employer believes warrants dismissal, the entire system of discipline in the plant may be impaired. I feel—though others do not agree—that an arbitrator should have the power to reduce the penalty of discharge to suspension. Exercising his discretion within this range enables him to use his skilled knowledge of industrial relations to bring in a balanced award.

An arbitrator should not, of course, attempt to mediate a dispute unless he is asked to by the parties. They have retained him to arbitrate—to dispose of their dispute by making a final and binding decision—and not to try to induce them to compromise. Proper enforcement of this rule is another reason why the arbitration of grievances has gained wide acceptance.

■ Theodore W. Kheel.
THE IRON AGE,

December 20, 1956, p. 27:11.

Are Your Salesmen Paid Too Much?

WHY IS THERE so much reluctance on the part of management to make downward adjustments in the level of earnings of salesmen? Only one out of 35 conferees at a recent marketing management conference believed it feasible to lower the level of salesmen's earnings. Yet most of the participants acknowledged that situations often develop where salesmen earn in-

comes that are beyond their worth.

There are four main reasons why so many companies allow overcompensation to develop:

1. Outright uncertainty as to the salesmen's worth—perhaps the most important.
2. Fear that salesmen have become indispensable in their territories.
3. Top management lethargy or

apathy in the area of wage administration.

4. Sales managers' bias in favor of high rewards for their sales people.

Uncertainty as to worth. The combined effects of advertising, product changes, and price shifts frequently cloud the picture of why sales have materialized. Not only is it difficult to determine the productivity of salesmen, but it is also difficult to obtain useful information on what the going rate of pay is for salesmen. Broad gauges such as turnover may indicate that the pay scale is out of line. But turnover rates reflect a variety of conditions, only one of which may be the level of compensation. Other guides to appropriate levels of salesmen's compensation are word-of-mouth reports; but these are often biased and represent too small a sample on which to base decisions. The individuality of selling assignments makes it especially difficult for companies to gather data on the incomes of salesmen selling the same product under the same circumstances. Accordingly, about the only place to look for guidance would seem to be the more generalized surveys.

True, most of these surveys cover so many types of firms that it is impossible to obtain from them a large enough sample of firms selling like products under like conditions. The fact remains that there is a role for such surveys. Indeed, they have to be used for all they can contribute.

Fear of salesmen. In some companies, a salesmen operates under a minimum amount of supervision. If he is successful, his customers look on him as their benefactor, and their

allegiance is to him rather than to the company. Once this relationship is built up, the salesman is a sort of monopolist, controlling the supply of customers in his territory. The company is reluctant to take strong action for fear he will leave and take his customers with him. As a result, he may exact an unusually large income.

Many companies have found that, when it comes to a test, no individual salesman is as indispensable as they thought. But the general attitude persists—"Why court possible trouble?"

Management lethargy. Under today's dynamic marketing conditions, management may fail to adjust the level of salesmen's compensation in accord with changing selling conditions. Thus, as new markets or new products or new marketing techniques evolve, the role of the salesman may not be interpreted, or reinterpreted, correctly.

Sales managers' bias. In a few companies the sales manager may have a bias favoring his men, even at the expense of the company. This may stem from past experience as a salesman, or it may reflect a natural attempt to maintain high morale. Bias may also develop from the tendency to think that sales volume is the measure of salesmen's worth. But that is not a very precise yardstick. Even though the margin on increased sales may be enough to carry increased compensation, why pay more than is needed? Management does not stop looking for more economical production processes just because it has machines that are currently operating efficiently.

The first step when contemplating

a change in the earnings level of salesmen is an appraisal of the role of the salesman in the firm's marketing mix. Fundamentally, the firm's marketing program represents a mix of product and price and promotion. Any one of these three can be altered to stimulate demand. If the choice is increased or decreased promotion, the two chief alternatives are advertising or personal selling expenditures. For each company, accordingly, management must determine how significant personal selling will be in the total sales formula.

It is imperative that management be on firm ground before lowering the earnings level of the sales force, both for its own sake in making a sound decision and for the sake of the effect on the salesmen. Where the firms in an industry are about the same size, employ a large number of salesmen, and the selling task is fairly standardized, correctly designed surveys on salesmen's compensation can provide desirable bench-mark data.

Most firms would also benefit greatly by supplementing available survey data with a job evaluation study to determine the importance of the sales job in comparison with other jobs in the company. Using this double-barreled approach to analyze the level of salesmen's earnings has obvious merit when it comes to explaining to the sales organization why downward adjustments in earnings are in order.

If the men can see the broad im-

plications of inordinately high personal selling costs—higher prices or lower profits—they are at least a little more likely to accept the change. Obviously, any good salesman is going to try to sell management on not making the change; but if he sees that alternative opportunities are less attractive, he will not fight it so hard.

But no matter how logical or necessary the move, it is likely to stir up emotional resistance. So management will want to do everything it can to soften the impact.

Thus, older men near retirement can be made exempt. Territorial realignment will enable the firm to reduce inequities in the earnings of individual men and to minimize the cut for those men hardest hit. In some cases, management can combine territories and thereby increase a man's work load but not reduce his net earnings. Fringe benefits can be introduced. Stability of earnings can be incorporated in the change.

It is not easy for management to pause in the hustle of getting additional sales long enough to examine its position in the light of underlying conditions. But the effort may pay off—whether the outcome shows that selling effectiveness is suffering because of too low a level of earnings for salesmen or that, as so easily can happen, money is being wasted by overcompensation.

■ Kenneth R. Davis.

HARVARD BUSINESS REVIEW,
November-December, 1955, p. 52:9.

OUT OF 165 million Americans, it is estimated that 105 million have some form of hospital expense, surgical expense, or medical expense insurance, *Northwest Insurance* magazine reports.

Too Much Paperwork in Purchasing?

SINCE GOOD BUYING must be backed up by proper use of basic forms and records, purchasing agents are faced with the problem of performing essential paperwork without being overwhelmed by its volume and complexity. A recent survey conducted by *Purchasing* magazine among purchasing executives in all types of industries reveals the growing scope of the problem and what is being done about it.

The problem is widespread: 91 per cent of the respondents say that their volume of paperwork has increased during the past five years. The typical increase is 25 per cent, with one-fifth of the purchasing men reporting increases of 10 per cent or less and another fifth naming increases of over 50 per cent.

A combination of normal business growth and increasing complexity of records was cited by 60 per cent of the respondents as the cause of the heavier paperwork burden. Normal business growth alone was singled out by 34 per cent, while only 6 per cent mentioned complex records as the only cause.

To cope with the paperwork problem, 73 per cent of the respondents have obtained management approval for expansion of their staffs. However, the difficulty of implementing this expansion is made clear by the fact that a shortage of clerical help is cited by 65 per cent of the purchasing agents.

A majority of the respondents (69 per cent) report that they have been able to mechanize a substantial part of their routine paperwork. Asked what they consider the best methods of lightening the paperwork burden, respondents named, in this order: simplification of procedures; training of present personnel; mechanization of procedures; additional office equipment; and adding new personnel.

What Supervisors Want from Top Management

MORE INFORMATION on both policies and decisions seems to rank high on the supervisor's "want" list; 36 per cent of the supervisory delegates polled at a recent National Management Association conference rated this the most important aspect of company-supervisory relations. Better understanding of what is expected of the supervisor was considered of primary importance by 26 per cent of the respondents, followed by more participation in management decisions (ranked first by 18 per cent), more training (15 per cent), more pay (3 per cent), and more authority (2 per cent).

NMA research director Norman George believes that the survey does not show lack of interest in pay, authority, or training, but rather reflects a deeper concern among supervisory personnel with their relations with higher levels of management.

—*The Iron Age* 12/27/56

How Efficient Is Your Scrap Disposal System?

How TO COLLECT and dispose of scrap most efficiently is an important dollars-and-cents problem in many manufacturing companies. Not only can costs often be significantly lowered by proper handling of scrap, but these costs can sometimes be converted into profits by well-planned resale or reuse.

A good scrap-disposal system begins with efficient removal of scrap from machines. When the volume of scrap produced is comparatively light, it is generally advisable to let it accumulate at the machine in a portable container, which may be transported at the end of a shift, or every few hours, to a central collecting point. Or, the scrap may be transferred directly from the machine to a powered wheelbarrow, or similar vehicle, if it is feasible to eliminate the intermediate container.

At some machines, such as punch presses and shears, scrap may be dropped directly into the containers. In most cases, however, other methods must be used to transfer scrap from machine to container, such as small conveyors. Belt conveyors are often utilized for this purpose, while apron conveyors can be installed where chips or turnings have sharp cutting edges that could damage non-metallic belts, or where these chips are long and springy and difficult to retain on a flat belt.

In large plants, automatic scrap removal becomes a necessity. In constructing large new plants, an auto-

matic scrap handling system can be built in underground. At the machines, simple chutes or vibrating conveyors may be installed to transfer chips to a collection conveyor or hopper.

In the plant producing a relatively light volume of scrap, the choice of method used to bring the filled containers to the central collecting point depends on the distance involved. If the distance is short, the most economical way to move the containers might be with a hand lift truck. If the machines and collecting point are too far apart to be negotiated conveniently with a hand lift truck, or if the volume handled is too great for manual handling, the versatile fork truck can pick up the containers, transport them and lift them for stacking or dumping into rail cars, hoppers or storage bins. Where collection of containers is made in a continuous path, the use of tractor-trailer trains should be considered.

If the daily production of scrap is 30 tons or more, it should be baled. The baling or briquetting process usually is incorporated into the over-all system, and is completely automatic.

While underground systems are ideal, surface automatic systems can be installed to carry chips through nonproduction areas, thus avoiding interference with normal plant operations.

An important factor to consider when installing scrap collecting systems is the ultimate destination of

the scrap. Many scrap dealers, smelters, and blast furnace operators require uniform scrap bales because of subsequent processing steps. For example, bales may have to be fed into blast furnaces which have relatively small inlet doors. In such situations, automatic weighing equipment can be incorporated into the processing line of a baling press. The entire baling sequence can be automatically controlled from the initial feeding of scrap from a feed belt to delivery of the finished bale.

While belt, apron, bucket, pneumatic, and similar types of bulk material conveyors are most widely used in chip-handling systems, other types of conveyors can be utilized under certain conditions. For example, an overhead trolley conveyor can be used

to load metal chips into gondola cars. In one such installation, the conveyor is loaded manually at the central chip bins in the basement. From that point, it travels up and out over a railroad siding, where approximately 35 tons of chips daily are automatically dumped into a waiting gondola car.

Scrap that has been collected and processed requires only final disposition to complete its handling cycle. When automatic collecting systems are employed, disposition also is usually automatic, directly to rail cars or trucks, or to storage in the plant or yard. If the scrap is loaded into cars or trucks, the handling system ends there.

■ Stanley S. Greene.

Flow, February, 1957, p. 63:17.

Job Evaluation: A Survey of Company Practices

JOB-EVALUATION PLANS are currently in effect in a majority of large companies and a substantial proportion of small ones, judging from data submitted by 132 executives to the Bureau of National Affairs during a recent survey of job-evaluation practices in industry. Here are some of the key findings of the survey:

All but one-seventh of the larger firms (those with over 1,000 employees) and one-fourth of the smaller ones report that they have some form of job-evaluation program. The plans are on a formal basis in 86 per cent of the larger companies with job

evaluation, but among smaller companies an informal approach is used by 43 per cent.

Among those companies that carry on job evaluation, the program applies to plant and office workers in roughly four-fifths of companies, to supervisors in about one-half, and to executives and sales employees in roughly one-fourth.

Job evaluation is limited to a single employee group in over 20 per cent of larger companies and 30 per cent of smaller ones. Among companies in which more than one employee group is covered, a high proportion—two-

fifths of the larger ones and half of the smaller—blanket them under a single job-evaluation plan.

The remaining companies that apply job evaluation to more than one broad employee grouping usually provide one plan for plant employees and another for the office group. Most of the variations from this pattern involve two evaluation groups—for instance, exempt and nonexempt, clerical and technical, or clerical and supervisory-executive.

Point rating is by far the most popular method used in job evaluation, being applied by some four-fifths of larger companies and one-half of smaller firms. Factor comparison and job classification are also used to an appreciable extent, with the latter method particularly favored by small companies. Ranking is used by only a handful of companies.

In nine out of 10 companies, job descriptions are obtained through an interview with the person supervising the jobs under study. This procedure is supplemented in most firms by one or more of the following steps: (1) holding a personal interview with at least one employee in each group of similar jobs; (2) having employees observed at their work by job analysts; and (3) having the employees fill out questionnaires relating to their own jobs.

The most common approach to the problem of the red-circle rate—an existing rate higher than that called for by an evaluation—is to rely on normal turnover: deaths, quits, retirements and the like. Over two-thirds of companies with job evaluation use this approach at least part

of the time. Roughly one-half of all firms "hold the line" on some red-circle rates until job-evaluation rates catch up with them. At the same time, nearly one-half of larger companies and one-fourth of smaller firms resolve the problem in some instances through transfer or promotion to higher-rated jobs. Finally, about one-sixth of larger companies and one-twentieth of smaller firms sometimes change job duties so as to upgrade employees whose rates are out of line with the evaluation scale.

Only 5 per cent of the larger companies and none of the smaller ones which carry on job evaluation follow a policy of cutting red-circle rates to the levels called for by the evaluation.

In about seven out of every eight companies which have job evaluation, the company either installs the system itself or collaborates with an outside consulting firm for that purpose. In either case, a majority of companies (64 per cent) install their programs through an evaluation committee; in most of the remaining firms, a single analyst is responsible for installing the system. Outside consultants are used to some extent in installing job-evaluation programs by about 45 per cent of larger firms and 55 per cent of smaller ones.

Costs of installing job-evaluation programs do not seem to vary significantly with size of company. Cost estimates ranged from a low of \$200 to a high of \$40,000, with a median estimate of \$9,000. Nearly two-thirds of the estimates ranged from \$5,000 to \$12,500. In the majority of cases, cost estimates were higher

for firms that used outside consultants in installing evaluation plans.

Administration of the job-evaluation plan is handled entirely by the personnel-industrial relations department in about 70 per cent of larger companies and 75 per cent of smaller ones. In nearly all of the smaller firms and in a majority of the larger ones, the top personnel executive has over-all charge of administering the program; in nearly one-third of the larger firms, the wage-salary administrator is entrusted with this responsibility. Close to 85 per cent of companies that carry on job evaluation make periodic reviews of their plans.

Among companies which had unions at the time their job-evaluation plans were first installed, about one-half drew up their plans without active participation by their unions. In some three-fourths of larger firms and three-fifths of smaller ones which have job-evaluation plans and at least some employees represented by unions, the union plays no part in administering the plan. In the remaining companies, the union participates in reviewing new or changed job classifications, but the degree of authority which it wields in such reviews varies considerably.

Most companies make some attempt to "sell" a job-evaluation plan to rank-and-file employees before installing it. Most commonly, such ac-

tion begins in meetings with foremen, who then pass on the information to their crews. In many instances, meetings are held with union officers or stewards, who in turn spread the information; such meetings, of course, take place when the job-evaluation plan is a negotiated one. Other devices used include letters to employees, articles in the house organ, and special handbooks. About a fourth of companies report that they take no steps to "sell" an evaluation plan before installing it. Respondents indicated that the great majority of both exempt and non-exempt employees approve of job evaluation.

In general, companies explain job evaluation much more fully to management personnel than to rank-and-file employees. Management people are fully briefed in about three-fourths of companies with job-evaluation plans; rank-and-file employees are fully briefed in only about one-fourth of companies.

Almost all of the personnel and industrial relations executives participating in the survey agreed that job evaluation is desirable, primarily because it reduces wage inequities, thus helping to cut turnover, eliminate grievances, and improve employee morale.

■ PERSONNEL POLICIES FORUM
No. 40: JOB EVALUATION (*Bureau of National Affairs, Inc.*).

MORE THAN TWO-THIRDS of all industrial injuries occur in businesses with fewer than 100 workers. Small business is thus paying most of the estimated national annual cost of \$2.5 billion for occupational injuries.

—Edward T. Dickenson, N.Y. State Commerce Commissioner

The Rising Costs of Fringe Benefits

THE GENERAL UPWARD THRUST of non-wage labor costs is clearly shown by the figures based on U.S. Chamber of Commerce surveys of 124 companies, two-thirds of them in manufacturing, from 1947 through 1955.

The total cost of fringes rose from 22.5 cents per payroll hour in 1947 to 46.1 cents in 1955, and to about 50 cents in 1956. The imputed cost of company-paid rest periods (including lunch periods, wash-up time, travel time, etc.) nearly trebled between 1947 and 1955—rising from 2.2 cents per payroll hour to 6.2 cents. The cost of three other fringe items about doubled. Pensions and other agreed-upon payments (including life insurance and medical-care premiums, separation pay, stock-purchase plans, etc.) rose from 6.6 cents per hour to 14.4 cents. Payments for time not worked (vacations, sick leave, holidays, etc.) climbed from 7.4 cents to 15.1 cents. The cost of bonuses and special payments (profit-sharing, service awards, etc.) rose from 1.8 cents to 3.4 cents. Meanwhile, legally required payments (social security, unemployment insurance, etc.) rose a bit more slowly—from 4.5 cents in 1947 to 7 cents in 1955.

Not all the "fringe" items are direct additions to the employer's payroll costs, of course. Payments for rest periods and time not worked, for example, may raise the employer's cost of doing business, but they are included in the employee's base hourly wages. Actually, about 46 per cent of the cost of the fringe benefits in the Chamber of Commerce tabulations falls into this category. The other 54 per cent (pensions, insurance, etc.) constitutes an actual added expense.

Fringe-benefit costs expressed as a percentage of the total wage bill have risen less sharply because wage rates themselves have risen. Fringes approximated 15.1 per cent of payroll costs in 1947, 21.7 per cent in 1955.

—*Fortune* 12/56

Every Worker a Methods Man

WITH THE AIM of getting more and better cost-cutting suggestions from its employees, Solar Aircraft Co. (San Diego, Calif.) has coupled its suggestion program with an employee training course in work simplification. The course, conducted by the industrial engineering department, covers the basic principles of methods analysis, time study, motion economy, and human engineering. After learning how to use a flow process chart to record and analyze the detailed steps of an operation, employees frequently come up with useful suggestions for simplifying procedures, and the company saves thousands of dollars yearly.

—Jack Grafrath in *Pacific Factory* 1/57

Toward More Effective Executive Controls

PROPER CONTROLS are so basic to the successful operation of any company that they are often taken for granted, with the result that management loses sight of their essential purpose and nature. Yet this must be clearly understood if the controls are to function effectively.

The first need for executive controls arises from the act of delegating authority. The power to do a job is rarely delegated by one level of management to another level without an eventual accounting. This accounting serves as a control to see that the job was successfully performed.

Secondly, executive controls are necessary to keep a working balance among diverse factions within the company. For example, the many alternative ways for a business to spend its money must be reconciled. Production cannot have all the machines it wants; marketing cannot do all the advertising it would like; research must be kept within bounds. The logic of the decisions dividing up funds, therefore, must be clear and incontrovertible.

Profits represent the one common objective of all diverse groups in most business organizations. An effective system of controls can help create executive harmony by making it possible to measure accurately the profitability of alternative actions.

A given control technique is useful only in terms of the other controls that exist within a particular organization. Credit controls may be splendid, but if they are so stringent

that sales are being lost at a time when stocks are plentiful, the over-all loss to the company may be far greater than a slight rise in bad accounts. Thus it is helpful to think of executive controls as a system that can be broken down into four types of control:

Organization. This means having the right men, in the right jobs, with the proper authority to work toward clearly established objectives.

A continuing, coordinated approach to planning, budgeting, and follow-up. The kind of planning that is involved here is not that done exclusively by the controller or by some separate control unit insulated from line management. This planning and follow-up must grow out of the thinking of all those who can contribute toward making the plans a reality. In this sense, control becomes self-control aiming at self-established goals.

Information. This information is usually in the form of reports or other written communications. It becomes a fundamental control in at least two different ways. Information that comes up through the line serves as a basis for decisions by higher levels of management. Information that goes down through the line is a way of telling lower echelons about policies and procedures.

Product development. Also involved here is market research and development, since these are frequently necessary corollaries to effective product planning.

The inclusion of product develop-

ment as an executive control may at first appear illogical. Yet in many respects product development is the master control, since the other controls are understandable only in terms of a company's products or services. Many changes in organization, for example, have been dictated largely by product needs. In the area of planning, all budgets tie into the product and the public's demand for it. When it comes to information, most of the vital statistics collected have to do with the life cycle of the product or service.

Product development, however, has at least two characteristics that would seem to differentiate it from the other controls listed above. First, product development signifies change and innovation. Second, it is usually considered to be a technical matter best left to the research experts.

These differences are more apparent than real. Change and innovation should, after all, be characteristic of any effective system of executive controls. The secret of good organization is to keep it adaptable to changing needs and also to see that it is self-replenishing. Product development, therefore, certainly need be neither more nor less changeable than the other controls.

Nor should product development be considered apart from other management controls on the grounds that

it is a matter exclusively for experts. To be sure, product development requires experts in applied engineering and research, as well as in marketing. But so, too, accounting and financial experts are needed in the planning process, and personnel experts are necessary in the organization area. Yet none of these areas is exclusively relegated to experts. The reason is simple: Organization is a matter of and for people, and so are planning and information. Control, to be effective, must be consistent with the interests and sympathies of these people. The same reasoning is just as applicable to product development.

Because of the importance of product development as a control, it would be desirable for executives to gain a greater understanding of this phase of their business. Most organizations are replete with all sorts of controls governing products or services already in existence while product development and engineering are delegated to some "research" or "development" group. If worker and executive alike were to take an active interest in product development, the need for certain controls, such as those governing quality, scrap, and time, might be substantially lessened.

■ William Travers Jerome III.
THE CONTROLLER,
November, 1956,
p. 511:3.

INDUSTRIAL OUTPUT in 1956 showed a modest gain over 1955, rising by four points to the record rate of 143 per cent of the 1947-49 average. This increase, however, was decidedly less than that recorded in 1955, when output jumped by 14 points from the year before.

—The Journal of Commerce 1/16/57

"Pirates in Gray Flannel Suits"

THERE'S A MANHUNT going on in this country. It's nothing to bother the FBI about—yet. But the aggressive pursuit of technicians and engineers is growing pretty rough. For industry is short some 175,000 members of the slide-rule set, and the schools aren't expected to fill the gap for another decade.

This represents a lamentable lack of foresight by business and government. And it is turning the business man into an out-and-out manpower pirate.

Until quite recently "pirating" was an ugly word in managerial circles. Several trade associations, in fact, had drawn up gentlemen's agreements in which the member companies resolved not to lure engineers from each other's establishments. It was a tissue-paper pact at best, but it did keep recruiting on the subdued and somewhat respectable side. This year, however, the Aircraft Industries Association, succumbing to pressure and reality, tore up its "no-raiding resolution." This means that the aviation companies have declared open season on the drawing-board experts.

"We're going to go in and slug like the rest of them," says one vice president in charge of manufacturing. "We used to have a policy of not hiring engineers who were working for other companies in our industry. But we found that we were the only ones living up to the understanding. Why, only the other day I found out that the fellow with that fancy sta-

tion wagon parked outside our offices every evening was a personnel man from another outfit. He was taking our men for interviews by the carload. Stole ten in the last two months. Pirates in gray flannel suits—that's what they are."

Actually, this man has a few canny recruiting gimmicks of his own. His corporation owns a small fleet of airplanes, supposedly used for dispatching "brass" quickly to branch plants all over the country. But company wheels now use commercial flights; the private planes are earmarked exclusively for pirating engineers. Whenever a member of the company's recruiting team spots a likely prospect in a far-off city, a company plane is flown in to whisk the startled applicant off to headquarters for interviews. The planes are used mostly on weekends, so that interested job jumpers can be flown several hundred miles and back for talks, and still show up for work on Monday morning (presumably to give notice).

Engineers aren't the only ones being raided. The men who do the recruiting are themselves being tapped for jobs with other companies. One company actually now has a recruiter to recruit recruiters. Reports one corporation bigwig: "I had a recruiting man doing a wonderful job for me. Getting engineers right and left. Then he got an offer from another company—and now he's raiding my men."

■ Lawrence Stessin. FORBES, December 1, 1956, p. 18:1.

"Wage-Savings Annuities"—One Way to Set Up a Pension Plan

EMPLOYERS WHO PLAN TO GRANT A WAGE INCREASE, but who are unable to make an additional expenditure for a desired pension plan, may find the answer to their pension problem in the solution adopted by the Velsicol Chemical Co. (Marshall, Ill.). Under this plan, described by Louis A. McLean in the *Labor Law Journal*, employees themselves invest the wage increase in a group annuity through an association of employees formed to contract with an insurance company.

The most frequently mentioned reasons for failure to adopt a pension plan have been (1) lack of funds and (2) insufficient desire on the part of employees to warrant the additional expenditure. The "wage-savings annuity plan" offers a method whereby some employees can receive the wage increase and others (usually heads of families with sufficient service to anticipate continued employment in the company until retirement age) can make provisions for their retirement security.

When 100 or more employees are willing to invest five cents per hour or more, several reputable insurance companies will be interested in writing a group annuity.

Factory Earnings Set a New Record

FOR THE FIRST TIME, average hourly earnings of production workers in all manufacturing establishments have reached the \$2 mark. Since they crossed the \$1 line in 1944, factory earnings have thus doubled in a little more than 12 years. Before that—in large part because of the depression of the 1930's—they took 24 years to double from 50 cents to a dollar an hour.

The rapid advance to the \$2 level is more startling when today's work week is compared with that of 1944. At that time, the average work week was 45 hours compared with the current 40—and more hours were worked at overtime rates. Using 1946, the earliest year in which the work week is comparable with today's, earnings doubled in a decade.

Of the nearly 13 million production workers in manufacturing throughout the country, about 7 million work in industries where gross average hourly earnings are currently \$2 or more. Within each of three industry groups—petroleum, ordnance, and primary metals—all major component industries which form the group have average hourly earnings of \$2 or more. Moreover, in six industry groups—primary metals, machinery, transportation equipment, printing, ordnance, and petroleum—comprising more than 4 million production workers, 9 out of 10 workers are employed in industries where averages are currently \$2 or more.

—*Employment and Earnings* (U.S. Dept. of Labor)

Employee Stock Plans: Some Pros and Cons

TO COUNTERACT the common employee attitude that most of the profit from their labor goes to "the owners," more and more companies are turning to employee stock-purchase plans. Since 1947, 40 per cent of all domestic companies with common stock listed on the New York Stock Exchange have adopted stock-purchase or stock-option plans for some or all employees. And this percentage includes only those plans of which the Exchange has an official record. There are many others.

A well-formulated employee stock-purchase plan can offer a company a number of advantages, not the least of which is the simple fact that employees may represent a source of an appreciable amount of investment capital—especially in these days of high wages and tight money.

But among the most common objectives in encouraging employee stock ownership are increased loyalty among employees and added incentive to work more productively. Even more important, however, a stock-purchase plan can dissolve the barrier that has traditionally separated owners and employees. It can be used to change the employee's impression that his own interests and the stockholder's are in conflict to a positive attitude that employee and stockholder have a mutuality of interest in aiming at the same goal of profits.

Still another advantage is that a stock-purchase plan can forge a strong communications link. There

is strong evidence that both hourly and salaried personnel generally read the company material they receive as stockholders even though they may not read the publications and other material they receive as workers and managers.

Along with the positive aspects of stock-purchase plans, there are potential negatives that must be considered before a plan is inaugurated. For example, one large printing company that had been closely held undertook a recent public stock offering in order to raise capital needed for expansion. But the company purposely did not devise a special scheme whereby employees could purchase this stock.

The head of the company expressed his thinking this way: "Our employees have the major part of their economic lives wrapped up in their jobs with us. It doesn't make sense for us to encourage them to invest their surplus funds in these same jobs.

"Ownership in a business involves risk. There is always the possibility that due to some change in conditions the value of our stock could decrease. If this were to happen, the level of the employee's savings would go down at the same time the value of his job went down—and this would be just the time he might need his savings the most. We are strongly in favor of working men and women owning stock and participating in American capitalism when they are

prepared to do so, but we believe they should diversify their economic interests rather than put all their eggs in one basket."

Obviously, however, the number of business leaders who discount this line of reasoning is growing. These men believe that the advantages of employee stock ownership outweigh the disadvantages. They say that if a company is willing to take the responsibility for offering a man a secure job, then the company can also take the responsibility for offering him a favorable means of participating in the ownership.

Other companies hedge by making stock available to employees under special arrangements but refraining from any promotion of the plans or from encouraging workers to buy. This is the case, for example, at Bridgeport Brass Co., which had a bad experience with a stock-purchase plan some years ago but now is operating a new plan successfully. Says President Herman W. Steinkraus: "No promotion of the plan has been undertaken, because though the directors feel that any employee wishing to become a stockholder should know that such a plan is available to him, he should not feel any pressure from management to take up the plan."

When a company installs a soundly based stock-purchase plan, it usually finds that the plan is well accepted. For example, when General Motors initiated its plan in October, 1955, 86 per cent of its 100,000 eligible employees signed up to participate immediately. At Scott Paper Co. about 50 per cent of the employees

participate. At Inland Steel, one-third take part.

The experience of Minnesota Mining and Manufacturing Co. indicates that employees represent a sizable source of capital. In 1950 a third of 3M's 2,727 employees subscribed for shares with an investment of more than \$2.4 million. Then, in 1954, a stock-option plan was adopted for which more than half of the employees were eligible; the company has since received \$3 million as a result of stock sales under this option.

Even if a plan does not have heavy employee participation, however, it can serve its purpose successfully. President George L. Clements of Jewel Tea Co. reports that only 10 per cent of his company's eligible employees have contracted for stock under Jewel's employee plan, but he indicates that the program is satisfactorily filling a need.

What benefits does the employee get under a stock-purchase plan? The answer is that different plans have different values. Sometimes their basic purpose is to provide a means of buying stock on the installment plan, through payroll deductions. Others are designed to give employees an opportunity to buy shares of an issue before it is offered publicly.

Many times the employee is given an opportunity to buy stock at less than the market price. The saving may be a few points, or as much as 25 per cent—and, in some cases, even more.

■ MANAGEMENT METHODS,
January, 1957,
p. 46:5.

ALSO RECOMMENDED

Brief Summaries of Other Timely Articles

GENERAL

IS THERE A NEW ECONOMIC STABILITY? By Paul W. McCracken. *Michigan Business Review* (School of Business Administration, University of Michigan, Ann Arbor, Mich.), January, 1957. Gratis. While automatic fiscal and monetary stabilizers, wise discretionary changes in public policy, and the stabilization of capital outlays have helped to reduce cyclical business fluctuations, the author believes that the business cycle is not yet extinct, since future public policy changes may be poorly timed and the cycles of individual industries may get more closely in phase. However, he is confident that we should be able to avoid the monetary panics which in the past have brought about severe depressions.

NINTH ANNUAL REPORT ON AMERICAN INDUSTRY. *Forbes* (70 Fifth Avenue, New York 11, N.Y.), January 1, 1957. 50 cents. Intended as a guide for investors, this special issue rates the management abilities of 201 leading companies in major U.S. industries. Numerical ratings are accompanied by discussion of the companies' problems and accomplishments and by charts comparing companies' performance in terms of earning power, growth power, payout vs. plowback, and profit vs. plowback.

FOREIGN OPERATIONS: A GUIDE FOR TOP MANAGEMENT. By John Fayerweather. *Harvard Business Review* (Soldiers Field, Boston 63, Mass.), January-February, 1957. \$2.00. Pointing out that skilled management of foreign operations is more essential than ever before because of increasing competition from other U.S. companies, local enterprises, and other industrial nations, the author offers a "frame of reference" to help top management

guide and evaluate a firm's overseas business. He discusses: (1) the adjustment of policies and practices to varying social, political and economic conditions; (2) the selection of flexible, open-minded executives for foreign operations work; (3) the problems of operating on an international scale; and (4) making the international division an effective intermediary between the domestic organization and the foreign units.

THE CRISIS OF SOVIET CAPITALISM. By Gilbert Burck and Sanford S. Parker. *Fortune* (9 Rockefeller Plaza, New York 20, N.Y.), February, 1957. \$1.25. Russia's forced and unnatural industrial growth, based on expansion of plant and equipment at the expense of agriculture and consumer goods, has brought about a crisis that is shaking the very foundation of the Soviet system, the authors report. Hobbled by a labor shortage, the Soviet Union faces the uncomfortable choice of sticking with its heavy-industry policy and risking revolt by the goods-starved population or shifting to a consumer-goods policy, which could indirectly pave the way for the disintegration of the Communist party dictatorship.

PRIVATE MUSEUMS GROW AS PUBLIC RELATIONS DEVICE. By Mitchell Gordon. *Commerce* (1 North La Salle Street, Chicago 2, Ill.), January, 1957. 35 cents. Ranging all the way from modest reception room displays to a sprawling replica of a 19th century village, more and more permanent exhibits are being set up by companies to draw attention to their accomplishments in commerce and industry. This article describes a variety of company exhibits and tells how a company can go about starting one of its own.

INDUSTRIAL RELATIONS

A NATIONAL PERSPECTIVE ON INDUSTRIAL HUMAN RELATIONS. By Harry Levinson. Industrial Relations Publications (School of Business Administration, University of Buffalo, Buffalo 14, N.Y.). 25 cents. Industry is paying far too little attention to the emotional problems—both those brought to the job and those caused by the job itself—of employees and managers, the author maintains. Pointing out that absenteeism, accidents, and alcoholism are costing business billions of dollars annually, he urges extensive industry participation in programs to foster mental health, including continuous research; facilities for specialized training of psychiatrists, psychologists, and social workers; distribution of mental health information; and seminars of executives and mental health specialists.

TO FIND THE RIGHT MEN AT LOW COST. By Dyne Englen. *Printers' Ink* (205 East 42 Street, New York 17, N.Y.), January 11, 1957. 25 cents. Pointing out that advertising is playing an increasingly important role in the hot competition for scarce engineer talent, the author analyzes the advantages and limitations of various types

of media and tells how they are being used to attract potential employees. Although most recruiting advertising still goes into newspapers, wider use is being made of magazines, radio, and TV, and the author suggests as one possibility a closed-circuit TV broadcast which could reach as many as 12,000 students on 50 or 60 college campuses.

HOW HAMILTON WATCH USES PSYCHOLOGISTS IN PLACEMENT. By Robert B. Konikow. *American Business* (4660 Ravenswood Avenue, Chicago 40, Ill.), February, 1957. 35 cents. Smaller as well as larger companies can make practical use of staff psychologists, according to the author, who describes how a personnel research group headed by a professional psychologist is handling a broad variety of personnel problems at a company with only 1,900 employees (Hamilton Watch Co., Lancaster, Penna.). Although the staff's main task is evaluating job applicants through the use of specially selected tests, it also applies its know-how in the areas of training, counseling employees on personal problems, evaluating job performance, and management development.

OFFICE MANAGEMENT

PLANNING AND CONTROL IN MACHINE ACCOUNTING INSTALLATIONS. By Maurice S. Newman. *The Controller* (2 Park Avenue, New York 16, N.Y.), January, 1957. 60 cents. "Production line" control techniques applied to machine accounting operations can cut data-processing costs and smooth out work schedules, says the author. In this article he describes the essential requirements of a standard cost system and recommends the use of the machine work-load chart in planning work schedules.

HOW TO MAKE FILE CHANGEOVERS LESS PAINFUL. *Sales Management* (386 Fourth Avenue, New York 16, N. Y.), January 18, 1957. 50 cents. To ease the tedious annual file-cleaning chore, this article offers a sort-as-you-go filing system as a means of speeding the classification of papers for retention or disposal. Through the placement of index tabs, files are divided into three readily identifiable categories: (1) record files—to be kept, perhaps permanently; (2) build-up material—working papers to be kept for limited

periods; and (3) informational material—current material of temporary value and of interest only to a few persons. Some representative retention schedules are included.

33 KEY ITEMS FOR PLANNING 1957.

Modern Office Procedures (812 Huron Road, Cleveland 15, Ohio), January, 1957. 50 cents. The scheduling of office functions can be made easier and more effective by the use of more

formal planning techniques, says this article, which offers a check list of 33 key items to be entered on the office manager's calendar. Over-all efficiency will be improved, suggests the article, if the manager will: (1) set specific times to do his planning; (2) deal with problems as far in advance as possible; (3) establish deadlines for all important jobs; and (4) put schedules in visual form with calendars, control boards, charts, etc.

PRODUCTION MANAGEMENT

NEW WAY TO SLASH INDIRECT LABOR AND BOOST PROFITS.

Factory Management and Maintenance (330 West 42 Street, New York 36, N.Y.), January, 1957. 50 cents. At the Automotive Division of A. O. Smith Corp. (Milwaukee, Wis.) manufacturing costs are held in line by prompt reporting of manpower utilization on each shift and close control of the ratio of indirect labor hours to total attendance labor hours. Calculations are based on "optimum hours" (standard hours, minus certain elements and allowances), which are figured in advance for each operation and used to determine control targets. Illustrative charts and examples accompany the text.

THESE 10 PRINCIPLES MAKE GOOD CONTAINER DESIGN.

By Edward L. Beers. *Flow* (812 Huron Road, Cleveland 15, Ohio), January, 1957. 50 cents. This article describes how a systematic, coordinated approach to efficient container design has substantially improved materials handling operations at Delco Appliance Division, General Motors Corp. Through the application of basic materials handling principles to container problems, the company has achieved an increase in storage capacity, reduction of container inventory, better plant safety conditions, and reduction in receiving time and shipping costs.

NEW WAYS TO SHAPE METAL. By Francis Bello. *Fortune* (9 Rockefeller Plaza, New York 20, N.Y.), March, 1957. \$1.25. Metalworking techniques, largely neglected by U.S. research laboratories, have undergone forced development to meet the challenge of shaping the tough new alloys that go into supersonic planes. The author describes some of the ingenious new metal-forming methods being used by aircraft builders, such as radial draw forming, chemical milling, electrical-discharge machining, and ultrasonic machining. Illustrated.

ENGINEERING OPENS THE DOOR TO SAFETY.

Safety Maintenance and Production (75 Fulton Street, New York 38, N. Y.), February, 1957. 50 cents. This article tells how a comprehensive, coordinated safety engineering program has paid off for one company (Good-year Atomic Corp.) in exceptionally low accident frequency and severity rates. The successful program includes a thorough safety analysis of every building; written safe-practice specifications; detailed records of all accidents; extensive employee safety training; and frequent unannounced emergency drills.

HOW CLOSE IS THE "AUTOMATIC WAREHOUSE?"

By Allen Harvey, I. D. Robbins and Sol Tanne. *Flow* (812 Huron Road, Cleveland 15, Ohio), January, 1957. 50 cents. For some

larger companies, automation of warehousing operations is entirely feasible right now—both mechanically and economically, say the authors. Describing how electronically controlled con-

veyors and other automatic equipment can carry out various warehouse operations, the article offers some representative cost analyses to demonstrate the savings possible.

MARKETING MANAGEMENT

MARKETING CHECK LIST FOR NEW PRODUCT.

By Richard Manville and Joseph Ungar. *Printers' Ink* (205 East 42 Street, New York 17, N.Y.), February 1, 1957. 25 cents. Pointing out that four out of five new products fail to make the grade, the authors offer a comprehensive check list to guide marketing executives in estimating the sales potential of contemplated new products. The list contains pertinent questions in 12 different categories, including: (1) analyzing the need for a new product; (2) determining who will buy it; (3) problems in developing it; (4) setting the price; and (5) evaluating a test-market trial run.

THE H. K. PORTER STORY.

Industrial Marketing (200 East Illinois Street, Chicago 11, Ill.), February, 1957. 25 cents. By combining centralized direction of over-all policy with decentralized operational responsibility, a broadly diversified corporation with 11 separate divisions (H. K. Porter Company) has achieved a flexible, effectively functioning advertising and marketing organization. This case history presents a detailed picture of how the principle is applied to the various types of marketing operation, from market research to direct mail.

TEN YEARS OF PROGRESS IN PREMIUMS.

By Gordon C. Bowen. *Advertising Requirements* (200 East Illinois Street, Chicago 11, Ill.), March, 1957. 50 cents. The widespread adoption of premiums as an extra buying incentive has tended to eliminate the competitive advantage once gained by the mere use of the technique, thus forcing

companies to put more creative effort into their premium campaigns, says the author, who is president of a premium service company. After describing the growth of various types of premiums in recent years, he concludes that, although trading stamps seem to have reached a saturation point, premium promotion in general will continue to expand.

PRICING FOR RETURN ON CAPITAL EMPLOYED.

By I. Wayne Keller. *N.A.C.A. Bulletin* (505 Park Avenue, New York 22, N.Y.), January, 1957. 75 cents. When a company is forced by rising costs to increase its prices, it may find that the use of return on capital employed as a basis for setting the new price level can be more advantageous than the common method of return on sales, says the author. He describes how return on investment can be used as a guide in (1) keeping the price increase to a minimum; (2) pricing different product lines; and (3) pricing to cover the increasing costs of replacing assets.

ONE WAY TO MEASURE ADVERTISING EFFECTIVENESS.

Tide (2160 Patterson St., Cincinnati, Ohio), January 25, 1957. 50 cents. A mathematical attempt to measure the effectiveness of product advertising in a particular market is described in this article, which explains the formula developed by a research organization (Arthur B. Little Co., Cambridge, Mass.) from tests conducted in six companies. The author cautions that experience with this technique is limited to a few industries and involves only a few advertising media, but

suggests that data resulting from the continuing studies may make it possible to refine the technique and increase its usefulness.

NEW LIGHT ON THE CONSUMER MARKET. By Irwin Friend and Irving B. Kravis. *Harvard Business Review* (Soldiers Field, Boston 63, Mass.), January-February, 1957. \$2.00. The new Bureau of Labor Statistics survey of consumer spending, now being assembled

and analyzed by the University of Pennsylvania's Wharton School, is the most comprehensive large-scale study of consumer expenditures, income, and savings ever conducted in this country. In this article, the authors show how management can make use of the 18 volumes of statistics, which are cross-classified to enable marketing executives to isolate important influences in family spending patterns.

FINANCIAL MANAGEMENT

CORPORATE DEBT AND THE STOCKHOLDER. By Louis O. Foster. Amos Tuck School of Business Administration (Dartmouth College, Hanover, N.H.). Single copies available gratis from the author. The author presents a method for determining "to a fraction of 1 per cent" whether a corporation will be better off borrowing or floating a stock issue when it needs funds for expansion. The article includes a hypothetical case study illustrating the use of the method, which involves rearrangement of the conventional balance sheet and statement of earnings, along with some simple arithmetical calculations.

CAN A PROFIT-SHARING TRUST BE A SUCCESSFUL PENSION PLAN? By Hilary L. Seal. *Trusts and Estates* (50 East 42 Street, New York 17, N.Y.), January, 1957. 75 cents. Although profit-sharing plans can be effective in improving employee incentive and morale, their use as a means of providing disability and retirement pensions has definite disadvantages compared with the traditional type of pension plan, the author contends. In presenting the case against the profit-sharing retirement plan, he maintains that (1) benefit schedules are inflexible; (2) a run of low-profit years may be disastrous for employees nearing retirement; (3) the employee cannot count on a specific

pension level; and (4) the employee promoted late in his career doesn't get a proportionate pension increase.

Rx EMBEZZLEMENT. By William R. Phelan. *The Controller* (2 Park Avenue, New York 16, N.Y.), January, 1957. 60 cents. Rising embezzlement losses indicate that too many managements have failed to install proper safeguards to minimize the possibilities of successful theft, the author says. After profiling the typical embezzler, he outlines a three-part program for protection against theft: (1) establishment of an adequate system of internal control; (2) engagement of independent auditors for periodic examinations; and (3) purchase of adequate fidelity bond protection.

MORE FOR YOUR CAPITAL DOLLAR. By John A. Griswold. Amos Tuck School of Business Administration (Dartmouth College, Hanover, N.H.). Gratis. In determining the rate of return on a capital investment, none of the popular so-called short-cut methods—cash payback, average payback and average investment—can compare with the discount method in accuracy and flexibility, the author believes. After describing and illustrating the use of the discount technique, he suggests some ways in which the necessary calculations can be kept to a minimum.

FOUR STEPS TO PROFIT BY SALES-CREDIT TEAM. By James B. Shoop, Rosa Basler, R. H. Lawrence, Howard A. Noble, Presley H. Meyer, and Carl Volkman. *Credit and Financial Management* (229 Fourth Avenue, New York 3, N. Y.), February, 1957. 25 cents. The credit and sales executives taking part in this symposium all agree that wholehearted cooperation between credit and sales departments is an es-

sential factor in getting and keeping good customers. They point out that (1) credit and sales can work together to straighten out a customer's financial problems; (2) a sales department can often assist in collecting accounts that have not responded to normal credit procedures; and (3) a salesman's information and judgment can aid in establishing accurate customer credit ratings.

RESEARCH AND DEVELOPMENT

MORE PRODUCTIVITY FROM ENGINEERS. By Charles D. Orth, 3rd. *Harvard Business Review* (Soldiers Field, Boston 63, Mass.), March-April, 1957. \$2.00. Instead of trying to hire more engineers, companies should concentrate on stimulating the creative potential of those already at work, declares the author, pointing out that in too many companies overemphasis on managerial status leads engineers to aim for administrative jobs, even though their actual interests and talents are technical and creative. He offers his views on how managerial attitudes and laboratory organization can be revised to provide a more productive atmosphere for the technical specialist.

ORGANIZING FOR EFFECTIVE R/D. By Robert K. Stolz. *Research & Engineering* (77 South Street, Stamford, Conn.), February, 1957. Reprints gratis. Many R & D departments have grown so fast that they are burdened with obsolete administrative structures, says the author. Among his recommendations for improving R & D organization are: (1) keeping the number of administrative levels to a minimum; (2) setting up a number of autonomous laboratories rather than one large, unwieldy group; (3) utilizing nontechnical assistants to help technical supervisors with the administrative load; and (4) encouraging informal relationships and de-emphasizing rank.

INSURANCE MANAGEMENT

TRENDS IN SURETYSHIP AND BROADENED FORMS. By John R. Taylor. *The Weekly Underwriter* (116 John Street, New York 38, N.Y.), February 23, 1957. 25 cents. Companies desiring complete insurance coverage of possible losses through theft and other criminal acts can make use of the "3D" bond, a comprehensive crime policy in which five types of coverage are consolidated. The author describes the outstanding features of the policy, which covers employee dishonesty, money and securities both on and off company premises, safe deposit boxes, and depositors' forgery.

TRENDS AND CURRENT ISSUES IN SOCIAL INSURANCE. By Herman M. Somers and Anne R. Somers. *Monthly Labor Review* (U.S. Government Printing Office, Washington 25, D.C.), February, 1957. 55 cents. Public benefit programs are now being accepted as essential to business welfare as well as to individual welfare, say the authors, pointing out that "social insurance" payments have become a significant factor in maintaining economic stability. They discuss some of the trends and problems of OASI, unemployment insurance, workmen's compensation, etc.



Executive Communications: Breaking the Semantic Barrier

■ *Stuart Chase*

THE MODERN EXECUTIVE lives in an increasingly complicated network of communication, with lines leading up, down, and sideways from his desk. He has to keep lines clear, not only to those below in the business hierarchy, but to whatever levels may be above. Some years ago, a New Jersey company called in a consultant to set up a so-called "vertical round table"—a discussion group designed to keep lines open between *seven* levels of management, from top drawer to assistant supervisor. (The experiment introduced them to each other for the first time, and worked out most helpfully.)

Important communication lines run outside the company, too, of course, to dealers, suppliers, consumers, government officials, and the general public—whose good will is so essential today.

Many excellent studies on the problems of communication have already been published. But there is a close relationship between communication and the lively young science of semantics, and executives interested in improving communication can take advantage of this new tool.

Semantics has been defined as "the systematic study of meaning." It deals mostly with words, but may include other methods of signaling, such as gestures, facial expressions, signs, and symbols.

The author of this article, a social scientist whose reputation as a commentator on economic questions was established in the 1930's, is equally well known today as an authority on communications. Among his many books are *The Economy of Abundance* (1934), *Power of Words* (1954), and *Guides to Straight Thinking* (1956).

UNESCO has been working on a system of highway symbols (curves, side roads, danger, etc.) which can be understood in any part of the world, irrespective of the language spoken.

Semantics goes far beyond dictionary definitions. It attempts to evaluate what a speaker really means, as contrasted with what he says. To call a man a "horse-thief," in literal dictionary terms, is to accuse him of a serious crime. But when Jones greets Robinson with "Hullo, you old horse-thief!" his intention may be nothing but affection.

The goal of semantics is a better understanding inside our heads of what goes on *outside* them, and consequently a better adjustment to our environment. It can help us to clarify meanings in much the same way as a good pair of glasses can clarify a landscape to one suffering from astigmatism.

From the outside world come signals and messages in the form of light waves, sound waves, shock waves, pressures. They follow nerve currents from eye, ear, fingertips, to the brain. What do they mean? If we interpret them incorrectly, we are in trouble. The sight of an oncoming car crossing into our lane can, in a sense, become a problem in semantics. So can the task of unscrambling such terms as "fair price," "reasonable profit," and "security risk." Insurance men, I understand, are having as much trouble defining "explosion" as the United Nations is having with "aggression."

The present author tried to bring the whole subject of semantics to a wider audience in 1938 with his book, *The Tyranny of Words*. Since then, there have been many books, monographs, lectures, and seminars devoted to semantics, and more than 100 colleges now give courses in the subject.*

Semantics takes its place beside a dozen other disciplines concerned with communication, ranging from the rigorous mathematical theory of Claude Shannon of the Bell Laboratories to studies

* Semantics was introduced into the language by Lady Viola Welby in a book called *What Is Meaning?* published in 1903. In 1921, Ogden and Richards brought out their devastating *Meaning of Meaning*, which, among other things, turned the great philosophers from Aristotle to Hegel upside down, and shook them vigorously for verbal content. Alfred Korzybski, a Polish-American mathematician, published *Science and Sanity* in 1933, introducing what he called "General Semantics"—a discipline which emphasized psychological aspects of meaning.

in how to listen. Automation is the child of cybernetics, and cybernetics, developed by Dr. Norbert Wiener of M.I.T., is a branch of communication theory.

When I investigated the excellent communication system at Pitney-Bowes, Inc.,* I was doing a little semantic research to determine how the rank and file got their suggestions, grievances, and stories up to top management and how management got its stories down. There were at least five upward channels, and more than that downward.

One particularly interesting channel at Pitney-Bowes is the annual "Jobholders Meeting," which follows the stockholders meeting and takes a similar form. (The semanticist is shy of the word "same," since no two events are ever *precisely* the same.) Workers hear the president, treasurer, and other officers give an account of what has happened in the past fiscal year and predict the fortunes of the company for the new year. Questions are in order from the floor, and plenty come. "I see here on the balance sheet that all our patents are only worth one dollar. That doesn't seem right," says a machinist. This one gives the treasurer some minutes of acute mental activity!

ROADBLOCKS TO COMMUNICATION

Perhaps the major principle of semantics is to stop, look, and listen when a message comes in to be decoded by the brain and not let it trigger off an emotional response. If there is time, consider what this particular message means coming from this particular source.

Equally important is the proper sending of messages. Will your words correspond well enough to the past experience of the hearer so that he can understand what you say? To use the terminology of Claude Shannon, will he decode what you encode? Without common experience stored in the memories of both speaker and hearer, the communication line is dead. "Foreigners" are not ignorant, they've just had different experiences. "Workers" (or "bosses") are not necessarily stupid; they, too, have had different experiences. If an Indian from the Amazon has never seen or felt snow, it is useless to talk to him about skiing.

* See "Communication Up, Down, and Sideways," *Reader's Digest*, September, 1952.

How does one identify roadblocks on the communication line? Out of more than a dozen which have been classified, here are the six most common:

1. *The confusion of words with things*

Words are so cardinal in human affairs that we tend to assume that behind every word must stand a physical thing to which the word refers. Take the term "unemployment." It sounds pretty specific, but to the student of semantics, it is exceedingly indefinite. He might make a list of various kinds of unemployment, using an index notation like this:

Unemployment₁, is where a man has lost his job and is looking hard for another one.

Unemployment₂, is where a man has lost his job but is not looking for another one. His wife can balance the budget.

Unemployment₃, is where a man needs a job, is looking for a job, but is physically incapable of doing a job (unemployable).

Unemployment₄, is where a man is laid off for a month while the model is changed to the biggest, longest, most beautiful number the world has ever seen!

Unemployment₅, is where a man is working part time and is looking for another part-time job to pay the grocer.

No wonder honest statisticians, trying to figure the exact number of "unemployed" on a given day, are driven to distraction!

The executive with a little semantic training never forgets that *words are not things*. "Unemployment" is a word in our heads, with no precise *referent* out there in the world of space and time. It can be applied to a whole spectrum of referents.

The Empire State Building, on the other hand, is more manageable. We can point to it, see the clouds form around the TV mast, go up and kick its solid cornerstone, and agree on a physical thing to which the term "Empire State Building" refers. When we discuss the "architectural beauty" of the building, however, agreement may vanish and a hassle develop. Why? Because "architectural beauty" is a term in our heads, for which everyone has a somewhat different meaning.

2. *The careless use of abstract words*

This roadblock is close to the one above. An abstract term should not be used carelessly. Everyone interested in international affairs today is talking about "aggression." The British committed "ag-

gression" in Egypt, the Russians committed "aggression" in Hungary, the Chinese committed "aggression" in Korea. A committee of the United Nations, however, after two years' intensive study, has been unable to define the term. The committee is in despair, but no semanticist is surprised. "Aggression" is an abstraction of a high order with severely limited usefulness. It has many meanings, on various levels. In international politics it has a "bad" meaning, but aggressiveness in business is quite different. We think well of an aggressive salesman, and we say a good executive should be alert and aggressive. But we don't like it when an executive displays "aggression" towards his associates.

Also up in the stratosphere are two formidable abstractions glowering at each other—"capital" and "labor." As all cartoonists know, one wears a plug hat, the other a kind of square cap popular with stone masons in the 1840's. These high abstractions can never come to terms; their combat is supposed to be eternal, and is formalized in the "class struggle" of Karl Marx. But the semanticist goes down the abstraction ladder to the real world. There he finds Company X in constant hot water with the unions, and Company Y not only living at peace with them, but using union shop discipline to produce better dividends. He also finds that "capital" is an increasingly muzzy term, now that the legal owners of most large corporations leave control to self-perpetuating managers who may own very little stock. This semantic exercise, incidentally, again demolishes the class struggle concept of Marx, which assumed a monolithic, unchanging "capitalism."

Abstract terms are necessary—indeed, we could not think without them—but we should be aware of their limitations, aware of the level they are on. When a politician sounds off about "liberty"—just liberty—the semanticist remembers the saying, "Your liberty to swing your arms ends where my nose begins." "Liberty" means little until we bring it down and ask: *liberty to do what?* Has a business man, for example, unlimited "liberty" to cut prices, or to enter into agreements in restraint of trade?

3. The confusion of facts with personal opinions

We meet this roadblock on every mental highway. Children should be warned about it at the age of ten, but seldom are. In

Madison, Wisconsin, reporters for the *Capital Times* took a sidewalk poll, asking some 300 citizens: "What is a Communist?" A farmer in from the country gave a typical reply: "They're no good in my opinion. I don't know what they are." Observe that he had no facts, could draw no inferences, but did not hesitate to jump to the opinion level and deliver a moral judgment!

The correct way to get at the truth of an event is precisely the reverse. First gather the relevant facts, then draw logical deductions from them. Finally, if the occasion warrants, deliver your personal *opinions*.

When two men from the Department of Justice arrived one day at Pitney-Bowes, rumors might well have gone racing through the plant: "They're going to close us up!" Management, anticipating such rumors, immediately posted this notice on every bulletin board:

All employees should assist the bureau's representatives in every way . . . such investigations by the Department of Justice have become almost routine throughout American industry. They represent a necessary policing of our economic system.

Thus management substituted a true meaning for a wild one. Rumors, which may be as dangerous to a business firm as fire and go even faster, are often dizzy leaps to the opinion level. They can usually be extinguished by a flood of plain facts. The alert executive will get his facts on the notice board *before* the event, if he knows it is coming.

4. Judging people and events in terms of black or white

Sometimes this roadblock is called "either-or thinking," sometimes "two-valued thinking." Many situations are indeed black or white, without shades of gray. A man is alive or he is dead, for example. But the vast majority of our big social, political, and economic problems are many-sided, not just two-sided.

The either-or thinker says, "Those who are not with us are against us," and consigns India to the Communist camp. The semanticist recoils at such a conclusion. It is bad enough, he thinks, to cope with Russia and Red China without taking on the half-billion inhabitants of the "neutral" nations.

If an employer takes the position that *unions are bad*, period, he is inviting unnecessary trouble in the world of today. If, however,

he takes the position that *some unions are badly led*, or *some union members are bad actors*, he will find life easier, for he is coming closer to the actual situation.

The bell-shaped frequency distribution curve is a useful offset to rigid two-valued thinking. If all the men in a given society are measured for height, and the figures charted, the curve will show a few seven-footers at one end, a few five-footers at the other end, and most of us in the middle. The case is similar for union members (or for employers)—the saints at one end, the so-and-so's at the other, and most of us in the middle. The curve represents the semantic multi-valued view, as against the two-valued view.

5. False identity based on words

This roadblock was the cause of great confusion in the days of Senator McCarthy. Anyone who disagreed with him risked being labeled a Communist, on the syllogism:

Communists are against McCarthy.
Spifkins is against McCarthy.
Therefore, Spifkins is a Communist.

"Things equal to the same thing are equal to each other" may be true of the *words* in a syllogism, but not necessarily of the actual situation. False identity can also be established by the old saying, "The enemy of my enemy is my friend." Similar reasoning would put the U.S. in the predicament of being Russia's friend when both censured the British for the invasion of Egypt.

Guilt by verbal association can also be shown in the classic case of the late Senator Taft. When he introduced his bill for public housing in 1947, he was attacked by certain real estate interests whose arguments boiled down to this syllogism:

Communists favor public housing.
Senator Taft has sponsored a bill for public housing.
Therefore, Senator Taft is following the Moscow line.

Following the same type of reasoning, a student of semantics could prepare another syllogism:

Communists favor apple pie.
Senator Taft favors apple pie.
Therefore . . . etc.

The trick is to find one characteristic, just one, shared by your

victim and a common enemy, and then leap to the conclusion that all their characteristics are identical. Since all of us have literally thousands of characteristics—sex, weight, height, eye color, race, religion, occupation, aptitudes, attitudes, beliefs—it is child's play to find one shared by any two persons, or by a person and an organization. With this common bond established, guilt (or innocence) can be "proved," at least well enough to make the headlines. Indeed, with this monstrous logic it is possible to prove anybody guilty of anything.

6. Gobbledegook

The last semantic roadblock we shall investigate is the clouding of meaning by fancy words. On the campus it is known as "pedageese"—the pedageese of the pedagogues, a variety of protective coloration. The term "gobbledegook" was invented by the late Maury Maverick, Congressman from Texas, to describe the language of paperwork in big government offices. Any big office is likely to come down with a severe attack.

A member of Parliament, A. P. Herbert, exasperated with bureaucratic jargon, once translated Nelson's immortal phrase, "England expects every man to do his duty," into standard big-office prose:

England anticipates that, as regards the current emergency, personnel will face up to the issues and exercise appropriately the functions allocated to their respective occupational groups.

An American office manager sent this memo to his chief:

Verbal contact with Mr. Blank regarding the attached notification of promotion has elicited the attached representation intimating that he prefers to decline the assignment.

Translation: Mr. Blank doesn't want the job.

On reaching the top of the Finsteraarhorn in 1845, M. Dolfuss-Ausset, when he got his breath, exclaimed: "The soul communes with the infinite in those icy peaks which seem to have their roots in the bowels of eternity."

Translation: He likes the view.

A Washington department announced:

Voucherable expenditures necessary to provide adequate dental treatment required as adjunct to medical treatment being rendered a pay patient on in-patient status may be incurred as required at the expense of the Public Health Service.

Translation: You can charge your dentist bill to the Public Health Service. Or can you?

To be fair to Washington, I should point out that the Federal Security Agency in 1950 made an intensive study of interoffice gobbledegook and issued an excellent report thereon, a report which every executive in business as well as government might well have on his desk.* It is not only instructive, but funny. For example:

The problem of extending coverage to all employees, regardless of size, is not as simple as surface appearances indicate . . .

Though the proportions of all males and females in ages 16-45 are essentially the same . . .

Dairy cattle, usually and commonly embraced in dairying . . .

These solemn statements, and many others found in the paperwork, enlivened the investigation.

SEMANTICS FOR THE EXECUTIVE

Semantics is no "monopoly" of heavy thinkers. It is for anyone to use who needs to keep his communication lines clear—and what business man does not? It is common sense combined with a systematic study of how words behave at various levels and how meanings can be better sent and received.

Beardsley Ruml has observed: "Reasonable men always agree if they understand what they are talking about." "Always" may be a little strong, but we can safely settle for 95 per cent.

* Hall and Grady, *Getting Your Ideas Across Through Writing*. Training Manual No. 7, 44 pages.

Income Taxes: The Grass Is Greener Here

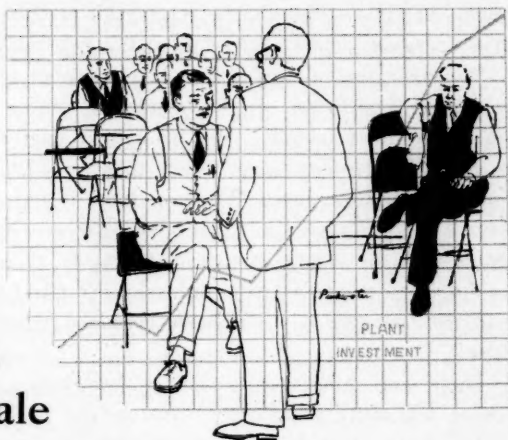
AMERICAN EXECUTIVES have no monopoly on tax woes; for all our problems, we get off lightly compared with taxpayers overseas. In a lecture delivered recently at the University of London, Lord Heyworth, the British soap king, compared American tax rates with those in Britain and some other European countries. Here are some comparative figures, reported by *Forbes* magazine: On a salary of \$25,000, a U.S. executive with two children is left with approximately \$19,000. His British counterpart is whittled down to \$10,600 by the tax collector. Worst off of all is the Norwegian; out of his \$25,000, he is allowed to keep just over \$8,200.

Men, Methods, and Morale

Management Techniques in a Growth Industry

■ **John E. McKeen**

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THE PROGRESS MADE in the profession of management is measured in part by the fact that we can analyze the importance and function of organization, planning, communication, and personnel selection and training, and that we can actually develop these skills in our managers. These qualities are the intangibles of our profession; they involve the *people* who make up our enterprises. And it is only now, at this stage in our industrial development, that we can regard them in terms of measure, as we do the physical tools of industry.

This does not mean that we can apply the same kind of measure to a man that we can apply to a man's work or to the machine with which he produces his work. That we may never be able to do, nor should we. But we know more about man today than we ever have before. We know a tremendous amount about the workings

This article is based on a presentation made by Mr. McKeen before the AMA Management Course.

of his body and an impressive amount about the workings of his mind. We know, because we have made it our business to know, many personal details that relate to the way his daily life is lived.

We know that a man's effort is in ratio to his well-being, and we know something of the conditions under which he lives and works most happily. We know that men are more efficient in their own performances when there is a sense of order and conviction around them. We know there is a strong willingness—even a need—in men to identify themselves with a cause, with a group, with the organizations they belong to; there is a capacity for loyalty that runs deep in the human spirit. And we know that the man does not live in whom pride does not stir when a job is well done.

These, and other related items of knowledge about man's state, are as important as anything else we are likely to learn in the course of our professional lives. For we are concerned with management, and management is concerned primarily with people.

The techniques of management, which can be applied to an organization to increase the efficiency of its operations and the well-being of its people, are many. Applied with devotion and determination, they can be effective.

MANAGEMENT TECHNIQUES AND COMPANY GROWTH

The industry with which I am most familiar is the chemical and pharmaceutical manufacturing industry. In 1930, the industry as a whole showed a combined net worth of less than \$3 billion. Today, this figure stands at over \$12 billion—nearly five times as much. These figures of growth suggest the nature of the cataclysmic problems of management that have arisen in this industry in the course of a 25-year span.

It seems to us at Pfizer that the problems that come with growth and diversification are all present in our company, along with a good many that may be peculiar to the company itself.

The necessity for flexibility is perhaps the chief characteristic of our industry. We are controlled by the restless mind of science—indeed, our future depends on feeding that restlessness. For this industry of ours can keep growing only by maintaining a constant search for new drugs which will not only be an improvement on

the ones in existence, but may well make them obsolete. In one move, a new development can rub out millions of dollars invested in plant, equipment, and inventory. This characteristic is the source of our industry's promise of longer life and better health for all mankind, but it is also the source of a constant, never-ending challenge to the managerial techniques we apply.

One of these is organization, which involves the use of both a skill and a tool—the skill of organizing, and the accompanying tool of the organization structure. To quote Lawrence Appley: "The purpose of organizing is to secure the maximum advantages and economies from the subdivision and specialization of effort while at the same time retaining unity of effort or coordination. Success in maximizing these two factors secures the most from each and the most from the combination of all."

ORGANIZING FOR FLEXIBILITY

How does a company whose size is doubled and redoubled and redoubled again and whose very character changes in the midst of the greatest growth push of all adapt its organization structure to these violently changing conditions? This is how Pfizer did it: During the earlier years, when our function was free of diversification and the president was in a position to keep on top of every phase of the operation, Pfizer was strictly a line organization, as were most small manufacturing companies at the turn of the century. Then, during the first period of substantial growth, we tried management by committee. Members of a large committee discussed problems on a regularly scheduled basis, voted on them, and made decisions accordingly. This kind of organization was soon found unsatisfactory: the meetings, with their long agendas and their volumes of minutes took a great deal of time, and the committee became ponderous. But more important, decision based upon the vote of a large committee often is a compromise decision, and, although compromise is a valued and even indispensable ingredient of our political life, it all too often has a weakening and ineffective influence on business. In a rapidly growing and changing company, the compromise decision is frequently the wrong decision.

Our first operating line-and-staff concept, which we arrived at in the reorganization that followed the management-by-committee pe-

riod, had the Executive Vice President reporting to the President, the major divisions reporting to the Executive Vice President, and the Plant Superintendents reporting to the Production Vice President. For a while this system was quite satisfactory. There was a minimum of confusion and red tape. Our effort was well coordinated, and we were able to bring all of our management's abilities to bear with unity on a single problem and arrive at decisions relatively quickly.

But every part of the business continued growing and booming. Our plant facilities became inadequate and we had to acquire new ones. By the time we began to function with 13 widely varied divisions, the existing unified organization structure began to look outdated. Our particular problem was helped by the creation of two new vice presidencies, each with broad responsibility for major segments of the organization.

Although, at the moment, this organizational structure serves us well, we are not bound to it. We are, however, bound to a principle that lies beneath it: the vital need to retain the ability to shift, to roll with the times, to determine before it is too late that a principle or a system which served well in the past needs to be changed—and then to have the courage to change it. The particular needs of our company have shaped our organization chart; those needs will continue to reshape it.

SELECTION AND TRAINING OF PERSONNEL

Our specific needs dictate, also, the second management function: the selection and training of personnel. It is vital that our people operate together as a team with each member performing his task with the highest possible degree of efficiency. Some of our needs are technical in nature—our researchers are scientists, of course; our pharmaceutical detail men must have a specialized educational and training background. But throughout the entire organization, the need is for men with imagination, judgment, and resourcefulness. Loyalty also belongs on this list—not necessarily because it fits a unique need of ours, but because it is a noble quality, and because other virtues in a man have a greater chance for development where loyalty exists.

Our personnel department is, in character with modern industry,

a vital and busy agency, and it applies rigid screening measures to those who come to work for us. We believe in interviews—not one, but several, conducted by people who are trained to evaluate attitudes as well as by those who are interested in a man's ability. We believe in the value of tests, which will reveal a man's aptitudes and his interests, the strengths and the weaknesses in his personality. A new man coming with us may occasionally be disturbed by the time and the effort that goes into his selection, but he will eventually be the happier for it.

We believe deeply in the value of training, partly to get the maximum effectiveness out of every man, but partly because we operate on a policy of promotion from within. We very seldom reach outside the company for a man to do a job if there is a man who can handle it somewhere inside the organization.

The best way for a man to learn a job, of course, is by working at it. On-the-job training has a two-fold advantage: If an executive turns over to one of his assistants a project for which he is responsible, without relinquishing responsibility for it, it gives him—and the rest of us—a chance to see what the assistant can do; moreover, it gives us an opportunity to see more of that executive's managerial capabilities. We are urging our executives to do just this wherever it is feasible.

Job rotation is another excellent device for the company that can afford what it costs in operating efficiency. Again, wherever possible, we make use of this technique.

We conduct in-company training for our executive material in such vital areas as human relations; we have regular seminars of a scientific nature for our professional men; and we make heavy use of outside training courses. In addition to training, we are constantly evaluating and appraising a man's performance and abilities, exploiting his strengths and giving him a chance to correct his weaknesses. To aid in this, we make use of forms and appraisal systems, which become part of a man's record.

MORALE: KEY TO EFFICIENT OPERATIONS

The policy of promotion from within touches on an area that is infinitely broader than that of a technique of management. It relates to morale. Morale and efficiency of operation usually go hand

in hand. They stimulate each other; where one exists, the other usually exists, and where one is missing, the other, more often than not, is also absent.

Because it deals with the human condition, morale is elusive—but that isn't to say that we don't know a good deal about it. The great adventure which has industrialized our nation has taught American business a wealth of things. It has taught us how to be ingenious and how to be practical, how to search and discover and invent and mass-produce—and, with it all, how to make money. But all this has not been accomplished in a vacuum, nor has it been done in a world populated by machines. It has been done by, with, and for people. Almost every one of man's essential characteristics has shaped this adventure—his ambition, his zeal, his gregariousness, and his tenacity.

So, quite naturally, we have learned much *about* people and how they achieve happiness and contentment in an industrial society or situation. We have learned much about how industry can help them achieve and maintain that feeling of satisfaction. That, essentially, is what morale is, however many further refinements can be brought to its definition—a condition of happiness and well-being molded both by the individual himself and by the organization he is part of. No matter how large the company or how far-flung its operations, the status of morale will be determined to a great extent by the individual's attitude toward his company—by his respect for it and by his sense of identification with it.

It is here, in the employee's need for identification with his company, that the company faces its most challenging obligation. To a high degree, of course, the employee's sense of identification will be stimulated by the company's attitude toward him. If the company recognizes the worker as an individual—and if the worker knows this recognition exists, if it is part of his working life that he can sense and believe in—then a healthy state of employee morale almost invariably will enrich that company.

Extending the recognition the worker wants and needs is not simple—it involves such matters as the conditions under which employees work, the hours they work, the wages they receive, the extra benefits that come to them with their employment. All these things are important. And their importance cannot be measured

solely in dollars and cents. They are important because they tell the worker that the company really *is* interested in him, in his problems, and in his welfare.

But the company's obligation does not end there. No company has ever yet created good morale among its employees through the sheer weight of employee benefit programs. More important is the company's recognition of the employee *as he relates* to the organization—a recognition of his place, his function, and his importance.

IMPROVING MORALE THROUGH COMMUNICATION

A management technique that is as important as any other in the creation of employee morale and, consequently, in increasing the operating efficiency of an organization, is communication.

Communication, in this sense, really has two meanings. The first involves satisfaction of the curiosity about what is happening elsewhere in the organization. That curiosity exists on every level, and it is as natural as breathing. It is ignored at a company's peril.

With Pfizer's growth, its foremen began to feel more and more out of touch with new developments outside their areas and we felt it wise to inaugurate a regular training program to keep them aware of new developments. As that program grew, it took on even wider functions. At the meetings, division and department heads explained precisely what they did and how the operations of their respective divisions fitted into the over-all company picture. This program worked so successfully that management personnel asked for and received a similar program. Such additional devices as a management bulletin and a company magazine are used to keep this flow of information running, to keep this natural curiosity satisfied, and to keep the sense of identity intact.

Besides the satisfaction of curiosity, communication has another meaning that might be defined as *rapprochement*. As our company has grown larger and circumstances have compelled us to modify or replace many of the practices of the old days, we have endeavored to maintain the spirit of friendliness and unity that all too often exists only in a small organization. Several top executives make it a practice every Christmas to hand out the annual bonuses and congratulate the man for a year's work well done. This practice will not necessarily find its way into a textbook, but it can be

highly gratifying. Another practice is the annual visit of the entire Board of Directors to each of our plants. There are many others, none of which, taken singly, is of earth-shaking importance. But taken collectively, the effect on the morale of members of the organization is incalculable. The organization structure stays intact, for the betterment of all, but men speak to each other across the lines of authority in tones of mutual respect and enduring friendship.

Morale exists when a man has pride in his company, and that pride can be fostered by effective communication. A sign that hangs in our Brooklyn plant reads: *Pfizer Terramycin Saves Human Lives*. The message is simple, but it is written in a language that cuts through the barriers erected in a man's mind by the humdrum events of a working day. That message reaches the worker, because it is true and because it is important. It lives proudly in some part of his consciousness, and he is a richer man for it.

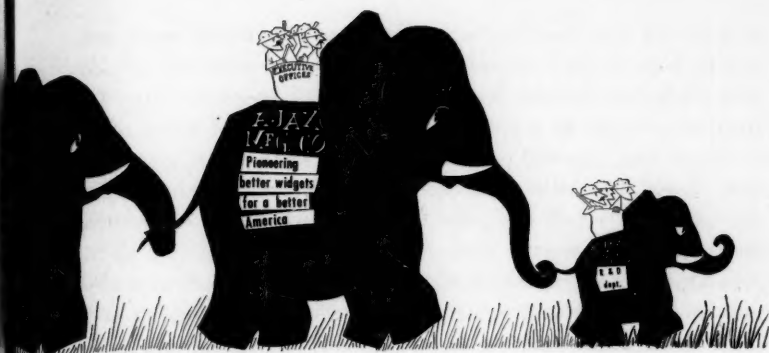
Handling Office Grievances: A Survey

THE TREND TOWARD PUTTING IN WRITING company policies that apply to office workers is growing, according to the Dartnell Corporation, which recently polled 185 companies to determine how they handle office grievances. Employee handbooks outlining policy are in use in 60 per cent of the responding companies. A thorough indoctrination of new employees is practiced by 80 per cent of the respondents, and 85 per cent rely heavily on supervisors to "sell" company rules and policies to employees.

Other techniques reported include group meetings to air problems and explain changes (used by half of the respondents); orientation programs for new employees (45 per cent); features in company magazines (40 per cent); and individual counseling sessions (30 per cent).

Among the grievances reported by the responding companies, wages receive the most frequent mention (85 per cent of respondents). Particular supervisors are a problem in 80 per cent of the companies, and general working conditions are mentioned by 60 per cent. Other prevalent grievances include promotional policies (58 per cent), physical conditions (47 per cent), and company policies (42 per cent).

To handle office-type grievances, only 60 per cent of the companies report having established policies and systems. The rest have no set policy or no policy at all, dealing with problems as they arise. Responses indicate that 85 per cent of the grievances are handled by the immediate supervisors, 8 per cent by the office manager, 5 per cent by the personnel department, and 2 per cent by the director of industrial relations.



Inside R & D

A Guide for Bewildered Business Men

■ **Carter C. Higgins**

President
Worcester Pressed Steel Co.

AS EVERY WISE MANAGEMENT KNOWS, a forward-looking company is the delight of its customers, stockholders, directors, and union officials. It is even the delight of its bankers, when they can tear their eyes away from the profit-and-loss statement long enough to pay attention. This is only one of many excellent reasons* why Research and Development departments are all the rage in industry today.

Suppose you are just about to establish an R & D department: who should be put in charge? It is not quite cricket to appoint the chief draftsman head of R & D, even if you give him a \$5 raise and he likes the title. Besides, R & D is expensive and you shouldn't try to get off cheap, even in a small company.

Another possibility to head up R & D is the lonely inventor type, who has been responsible for many of the ideas that have paid off for your competitors. Unfortunately, this type does his best work

* Another reason is that if your company plans to be in business ten years from now, it will need to have something to sell.

between 11 P.M. and 2 A.M., with a glass of whiskey beside him, and he hates to be interrupted. He would be a problem; he probably couldn't even pass proper psychological screening tests. The worst of it is that he is frequently the most productive fellow of all.

At any rate, you will probably need your own R & D group, and they should have their own quarters—preferably separate, so they can easily be locked off, out of sight of wandering competitors. Some companies disguise their research quarters by hiding all the apparatus in drawers out of sight of prying eyes. Others establish museums of rarely used test equipment, confident that, if the engineers don't understand its functions, visiting bigwigs will never know enough to ask embarrassing questions beyond a routine, "What is it?"

Engineers, however, tend to become lonely if they cannot talk to others of their kind. The language of the engineer, sometimes referred to by your star salesman as "jargon," is so obscure that some companies have found it necessary to employ interpreters so they can understand what their engineers are trying to say. Clearly, if people wish to talk jargon, it is best to get three or four of them so they can go to it. Engineers like their ideas to be recognized by competent superiors, even if they are not very well understood.

It isn't the easiest thing to define what your research and development engineers ought to be doing. Some of them have bushy hair and manage to look very busy whether they are doing anything or not. When our department was new, R & D got all the left-over problems. They had to consult with salesmen on tough accounts, teach methods and time measurement, make operation layout for the estimating department, check the physical properties of steels, and ask customers for .002" more tolerance. However, we have come to realize that some thinking can be more effectively carried on elsewhere in the organization.

Where does R & D fit into the company organization? In some companies, the head of R & D reports to the president direct, but this is not the only possibility. An R & D department in the company is proof in itself that the president is forward-looking. Why not put it a bit further away on the organization chart so someone else can get a reputation for being forward-looking, too? The presi-

dent probably has so many people reporting to him as it is that he can barely manage to read all his magazines, and he doesn't want to violate the sound business principle of getting your work done at the lowest level where it can be done well.

Where, then, *should* you put R & D? Perhaps, hoping it will develop products, you feel it should have a sales complexion—and the sales manager, who knows markets, is perfectly willing to take it on. But this has its drawbacks. After a while you are likely to find R & D spending its time working on Customer A's problems and Customer B's complaints and the question of how many widgets can be sold in the next five years. Obviously, this arrangement isn't really satisfactory.

If you put R & D under the comptroller, they will doubtless get out some beautiful reports and little else. If they are put under the production wing, they will be busy on equipment and layouts, new ways of degreasing, and automatic shaving of metals. An ideal state of affairs—but what happens to your hopes of developing new kinds of widgets?

Some Research and Development departments are essentially independent. Unless somebody keeps them in line with company needs, however, they may spend months coming up with some insignificant little formula like $e = mc^2$, which is obviously of no earthly use to your press shop. Especially in the smaller company, it seems likely that R & D should work on assignments.

The work of other departments is easier to measure than that of R & D. Other department heads soon find this out, and as a result R & D frequently winds up with others' lemons as well as the odd, dirty jobs such as reading government specifications and seeing why Miss B's office isn't warm enough in the morning.

At Worcester Pressed Steel, we have always done Research and Development work, though we didn't always call it that. At present, our R & D department is under production, with the proviso that all *major* assignments are approved by a committee consisting of the heads of sales and shop and Hi-Pac, the head of R & D, and the president. Often we don't accomplish so much, and minor assignments seem to eat up a good part of our effort, but at least the blame is widely spread.

How large should your R & D department be? One school of thought holds that if five men can do the work you ought not to hire 25, even though the five may not be prepared to stop every bunt, line drive, pop-up, Texas leaguer, or outfield fly; good consultants are available. Another school argues that you ought to have a specialist for every scientific specialty. Still another maintains that it's necessary to have enough general men on hand to handle any crash program that may come along. If the latter schools ever get together and you have to have enough of each specialty to take care of any possible crash programs, it will be time to start studying the hotel business.

One happy little game in R & D that you should know about is called "swapping engineers." To play it, you get together with two or three other companies and hire their engineers away at a substantial increase. They, in turn, hire yours the same way. Before too long all the engineers have made the rounds and are back on the same old jobs, drawing more salary than the boss. This is good only if the boss was looking for an excuse to raise his own salary anyway.

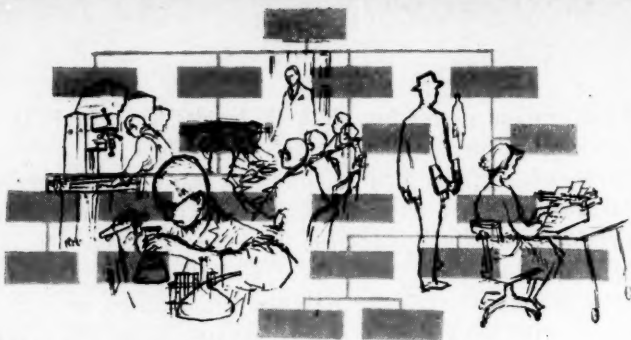
Research and Development needs Indians as well as chiefs. You cannot afford to pay engineer-type salaries for people to do drafting or routine correspondence, and even if you could there aren't that many engineers. But you can get technicians to do a lot of the routine work and free the engineers to think. Fortunately, R & D people usually do not demand that their young lady assistants be as gorgeous as the sales manager's. Also, promotion from within the company to R & D boosts the morale of the company as a whole. It makes people feel good to see old friends walking around in white coats.

Some people are successful in selling R & D to friendly customers or to the government. Except for the time spent arguing with government auditors about what is reasonable overhead, this will cover a good part of your out-of-pocket costs, and will still leave you your public relations advantages and a nice group of people. Unfortunately, the government has a way of handing you a crash program just at the time you have your own particular program well under way.

What can you expect from R & D, besides headaches? To be impatient for results is risky. Engineers have high I.Q.'s and are rather sensitive. If you shout at them that you want more results, they will hurriedly get more durable gloves for the washing-machine operator—but what will happen to the widget you were hoping to make a fortune on three years hence? Give them time. If you say that R & D will have to pay for itself in a certain period, great efforts will go into the preparation of reports proving that the goal is being reached. Such reports are not the purpose of R & D. It is dangerous to emphasize patents and sparkling process improvements and public standing and reports, lest they become ends in themselves. Probably the best way to estimate how long it will take R & D to pay for itself is to use "sound judgment." No one can argue with that. (I know one manager of R & D who says his work will pay off in 15 years. He makes a pretty good case, and plans to retire 14 years from now.)

Measuring the performance and effectiveness of an R & D department is another area in which "sound judgment" may run rampant. For what it is worth, here is the system I have devised: I put my head into the department, examine the ash trays for evidence that someone has been there right along, measure the staleness of the air, and note the amount of paper littering the floor. Sometimes I ask the R & D manager why a particular project isn't ready yet. (If he says he doesn't know, I can assume everything is normal. If he makes an excuse, I know that something is being covered up.) Following this little excursion I go back to my office, confident that if I can't find anything amiss, neither can anyone else.

LIFE INSURANCE in force in the United States has reached \$400 billion—twice as much as the amount outstanding at the end of 1948 and four times as much as in 1936, according to Claris Adams, Executive Vice President of the American Life Convention. *Time* reports that \$50 billion additional protection was written during 1956, and that life insurance company assets rose by \$5 billion to \$95 billion. Benefits paid to the 103 million policyholders—60 per cent of the U.S. population, 75 per cent of its families—were \$6 billion, over twice the 1946 total. Despite the size of these figures, however, the average protection per family (slightly over \$7,000) is less in proportion to income in the U.S. than it is in Canada, and less than it was in the U.S. 15 years ago.



“Patchwork Organization”: Its Causes and Cures

■ **Milton C. Lightner**

President

The Singer Manufacturing Co.

DESPITE an extensive literature on organization planning and control, there is a lack of widespread, systematized knowledge of the basic principles of organization and their practical application in the day-to-day administrative process. Much has been written on how different companies have actually organized to attain objectives, but little has been done in seeking to analyze how those companies, or others, might best have organized.

Some business enterprises have no organizational policy or philosophy as such, but have grown along the lines of the preferences of the strongest members of their management teams. In other companies, principles have been recognized, but their application has been so varied as to evidence very little consistency.

Some companies have gone to great lengths in preparing job descriptions for purposes of salary and wage administration, but such job descriptions record only the existing reporting relationships, and little consideration is given to whether the relationships so existing are right or wrong. Perhaps the greatest barrier to the establishment of appropriate organization structure in a going firm is realization of the personality difficulties and embarrassments that would arise as a result of making needed changes.

This article is based on a paper presented by Mr. Lightner before the Committee of Sponsors for the Third International Conference of Manufacturers.

If management is to discharge its social responsibility fully in the light of future requirements, managers can no longer blithely ignore the lessons to be learned and the advantages to be gained from sound organization planning and control. Among the reasons for the increased urgency of the problem are population growth, expanding technology, and the size and diversification of business units.

Since the beginning of the twentieth century, for example, our population has increased from 76 million to over 165 million, and statisticians estimate that it may be over 228 million by 1975.

In addition to this increase in population, the expected span of life has been greatly lengthened. In 1900, the life expectancy of babies less than a year old was 49 years; in 1950, it was 68 years; and reliable actuarial estimates predict that by 1975 the average new arrival may expect to live to be 73 years old.

Although we are increasing the average age of our population, we are also increasing our birth rate: it is now estimated that eight babies are born every minute. Our rapidly expanding technology requires an increase in the number of years a young person must spend being trained and educated before he becomes productive. If, at the same time, we continue to decrease the age at which we retire our older people, we will be faced with the problem of making much more productive the relatively fewer people available to supply the needs for goods and services for a much larger non-productive population.

Coupled with these trends, we find an increasing recognition of the potential values of leisure and the natural and human demand for improved standards of living. We cannot achieve improved standards without greatly improved individual productivity in the relatively small group that will be producing and in the comparatively small amount of time they will be willing to spend at work.

The speed of our productive process will be such that day-to-day operating decisions will also have to be speeded up. It will not be possible for the executive to spend hours each day conferring with specialized advisers, individuals, or groups. Thus the organization structure must provide for channeling and coordinating the results of the deliberations of highly technical, specialized subordinates in such a way that decisions are greatly expedited and facilitated. In order to achieve this end, the authority to make and effectuate deci-

sions must be placed as closely as possible to the point of action, and this, in turn, will necessitate much more carefully centralized controls over the decentralized operations.

Further complicating the problem will be a continuing increase in the size and diversification of our business units. Growth and diversification place greatly increased demands on management capacity. Since both old and new activities must be coordinated, the alert manager, recognizing his individual limitations, improves his organizational and administrative processes.

In the light of our current human, technological, and management needs, the primary aims of organization planning and control must be conservation of human resources and improvement of man's economic status. Managers cannot discharge this social responsibility unless they use all the available tools of administration. One of the most important of these is sound organizational practice, based on the fundamental principles of organization and on the skill with which the administrator puts the principles to work.

THE FIRST PRINCIPLE OF ORGANIZATION—PEOPLE

People are the first principle of organization. In some cases, of course, machines or other devices can be substituted for people, but in no case is it possible to avoid the use of people somewhere in productive processes.

No two individuals are exactly alike in their traits, characteristics, abilities, or inherent capacities. Yet, with respect to any one of these factors, a larger percentage of any sizable group of people tends to fall around a "norm" or average than at the extremes. The distribution of abilities and capacities in any one individual is somewhat similar. The sound organization planner sets up his jobs around average or normal distributions of characteristics in the population, in order to be assured of a continuous supply of people reasonably capable of doing the jobs. The executive who selects a candidate to fill a job attempts to find a person who rates above average in the characteristics that are most important to successful performance. Most individuals find greatest satisfaction in positions requiring those traits in which they excel, and they are best motivated when their assignments will provide for the development of their abilities to the fullest extent of their individual capacities.

In unsystematic organization and administration, job content is frequently built around the abilities of the individuals available. Systematic administration, on the other hand, attempts to find the person who most closely matches the ideal job content requirements. Business institutions that use the unsystematic approach are likely to be the victims of wasted human resources through internal friction, intra-organizational politics, and personal empire building. Those who use the systematic method realize that the ideal situation of perfect man-job matching will never be fully achieved but, to the degree that it is approached, will eliminate many sources of human inefficiency.

THE SECOND PRINCIPLE—COORDINATION

The objective of planning the organization structure is to provide for coordination of the activities of the cooperative team members. Unless there is order and system, there can be no integration of what would otherwise tend to be disjointed and undirected efforts of a heterogeneous group.

However well matched jobs and men may be, and no matter how cooperative people may be, coordination cannot be achieved without giving some people authority to direct the work of others. The exercise of authority relies on the power that is conferred by the organization structure. It cannot be most effectively brought to bear unless those upon whom it is exercised willingly submit to it through recognition that all members of the group have a common interest and thus an obligation of mutual service.

Mutual service has been called the moral aspect of authority.* In this concept lies the implication that members must understand their obligations and those of other members; they must accept the real purpose for which the organization has been created and understand why achievement of the common objective is essential to the mutual welfare.

Unfortunately, however, most people enter business organizations without this fundamental knowledge. Even if they understand a few of the essential points, they may quickly lose sight of them as they become absorbed in their day-to-day activities. This means

* Lyndall F. Urwick, *The Elements of Administration* (Sir Isaac Pitman & Sons, Ltd., London, 1943).

that initial and continuing indoctrination of all members of the organization in its objectives, its progress, and its ideals must be the chief objective of the process of communication.

In addition to achieving a concept of mutual service through indoctrination, we must provide for a well-established discipline. This concept of discipline includes the immediate reaction to an authoritative command and the reward or penalty that follows obedience or disobedience. More important, however, it means discipline imposed by the individual upon himself as a member of the organization, which he learns through the precept and example of his co-workers and those in authority over him. The obligation of self-discipline becomes increasingly greater as managerial grades ascend from the bottom to the top of the organization pyramid, since decisions made and actions taken at each higher level of the organization affect more and more "mutual servers." Adherence to sound philosophy and principle, expressed in terms of well-formulated and sound policies, is essential to maintenance of that authority without which coordination is impossible.

THE THIRD PRINCIPLE—GRADING

The grading principle implies that, in larger organizations, the top coordinating authority cannot personally command and also perform productive operations, nor can he remain personally in close enough touch with every situation that may require his attention. He therefore cedes to one or more subordinates a part or parts of his authority. As the coordinating job becomes increasingly demanding, the second grade cedes some of its authority to people at a third grade or level, and so forth. This principle recognizes that there are more men with the ability to exercise limited authority at lower levels than there are with the capacity for higher-grade or supreme command.

In no way, however, does the grading of authority detract from the broader authority of each succeeding higher level or grade, nor does it dilute the supreme coordinating authority at the very top.

It is essential to successful delegation, leadership, and coordination that the area of authority of every individual be defined—preferably in writing. Matters for which the superior holds the subordinate accountable to him must be defined in nature and scope

as well as in terms of criteria of performance. The superior will not be an effective coordinator if he fails to delegate authority commensurate with accountability, if he does not hold his subordinate personally accountable to him for improper or erroneous exercise of such delegated authority, or if he omits recognition of good performance.

To use an admittedly oversimplified example of the operation of the grading principle, let us assume that a business organization has a vice president in charge of sales, and that reporting to him are six regional sales managers. As the business grows, it becomes apparent that there must be more regional sales offices if the business is to get its share of the market. A market survey indicates that there should be ten regional sales managers, and, after some discussion of the similarity among the operations of the various sales regions, it is decided that this would be too many for full coordination by the vice president. It is therefore decided to install two new executives, called "divisional sales managers," who will each report directly to the vice president in charge of sales and be responsible for five regional sales managers. Thus, another grade or level has been added.

If, as a result of further growth, the company is faced with the apparent need for dividing the regions into districts and setting up district managers under the regional managers, they will have to choose between (1) the communications dangers of creating another grade of supervision, and (2) the introduction of a new concept—that of staff service. This phase of organization will be covered in the discussion of the staff service principle.

THE FOURTH PRINCIPLE—SPECIALIZATION

We know that people are limited in the number of things that they can do well, and that repeated performance of those things for which a person is best fitted can improve his productive capacity within the limits of his interests and satisfactions. For these reasons, historical experience in successful organization has led to the principle of "specialization" or "functionalism" or "functional differentiation."

The practical uses of the specialization principle can perhaps be best discussed by continuing the example of the growth of our hy-

pothetical sales force. We have assumed that the company has grown to the point at which it is necessary either to add another grade of command in the form of district managerships or to make a complete re-evaluation of the duties assigned to the sales force. An evaluation might reveal the fact that each regional sales manager is responsible, not only for the actual sale of the product, but also for all the auxiliary operations necessary to the sale, such as physical distribution, warehousing, advertising, accounting, personnel administration, and preparation of sales agreements. Everyone connected with the company is willing to agree in theory that salesmen *should* specialize in selling and that the auxiliary operations should be assigned to specialists. But theory is one thing and its practical application to what a sales executive has previously considered his own domain is another. He may feel that his duties are being downgraded or that his position will lose importance in the eyes of his colleagues and friends if any part—no matter how small—is taken away from him. No matter how the organization planner may seek to persuade him that he is being relieved of minor duties in order that he may concentrate on the more important aspects of his job, there may always be some residual resentment. Much of this can be alleviated through appropriate descriptions of the new positions to be established, of the reporting relationships, and particularly of the areas of responsibility and authority of all concerned. Most effective will be financial recognition of the upgrading of the sales manager's position.

As modern managers provide for more and more specialization, they are continually harassed by the problem of coordinating a wide variety of widely different individual or group activities. Failing to recognize that understanding of differences in assignments, authority, and responsibility is essential, they object to the systematic approach inherent in the provision of accurate job descriptions on the grounds that such descriptions make for "inflexibility" in assignment. Actually, the so-called "flexible" organization causes far greater coordinating difficulties.

Another objection to the separation, specialization, and specification of duties is that individuals are not permitted to use their initiative in taking on new duties. Urwick has the best possible answer to this objection: "It is difficult enough to find suitable individuals

to fill positions of responsibility when one-half of the equation is 'given'—that is, when the job is defined. When both the job and the man are uncertain, unknown quantities, hours and days are likely to be expended in fruitless discussion and indecision."*

THE FIFTH PRINCIPLE—STAFF SERVICE

Continuing and growing recognition of the advantages of specialization properly applied has led to another kind of distinction between duties—a distinction between the authority of command, which is inherent in positions in the line, and the authority of expertness in specialized ideas, which is inherent in staff positions.

The so-called "staff" has a threefold assignment: counsel, service, and control. First, the specialized staff executive assembles and presents information in his field that is needed in making decisions, usually giving his advice on the interpretation and application of this information; second, he provides certain services that can best be centralized in one related unit rather than distributed among many units; and third, he determines for his line superiors the degree to which policies are being carried out and plans completed.

In order to appreciate the manner in which the staff service principle can be applied, we can carry further our illustration of the expanding sales department. Let us assume that management has decided that, rather than add another grade in the form of district managers between the salesmen and the regional manager, it would be better to permit the regional sales manager to concentrate his efforts along sales lines and to relieve him of all duties and responsibilities for auxiliary or facilitative operations. This is to be done by assigning to him certain specialists in the auxiliary functions. Whether these specialists will report to the regional sales manager, to the divisional manager, or to the sales vice president will depend on the degree of centralization or decentralization desired.

The solution to the question of centralization versus decentralization lies in the individual business organization and its peculiar needs. The decision must be made on the basis of which approach or compromise between the two approaches adds to or detracts from adherence to the basic principles of organization and the achievement of individual company objectives. Over-centralization makes it dif-

* *Ibid.*

ficult to avoid the appearance, if not the actuality, of giving line authority to the staff service units. Over-decentralization can weaken controls to the point at which coordination suffers badly. The objective of decentralization is to place decision-making and action-taking as closely as possible to the point of action. When this is done, however, the control phase of the staff function assumes relatively greater importance.

Staff units should adhere to the line at that point where the most important phase of their activities can be performed most effectively. For example, if the control phase is most important, as in the case of the controller, he should report to the chief executive. If the counsel or service phases are the more important, it will in most cases be more advantageous to have each important line executive provided with his own specialized staff at his level. This kind of staff should report through the line in most cases, rather than to the general staff units assigned to the top level.

Useful as the illustration of the expanding sales department has been, it is applicable to one particular situation and takes no account of long-term, over-all institutional objectives, a governing organization policy and plan, or the integration of methods of organization for sales management with central corporate line and staff activities. A description of the steps to be taken in providing for company-wide application of sound organization practice will fill these gaps.

PRACTICAL STEPS TOWARD SOUND ORGANIZATION

A company does not have to be a giant corporation in order to initiate steps to improve organization practice and to undertake the continuing job of maintaining sound organizational concepts and practices in the face of an ever changing economic atmosphere. The matter of getting organized for optimum achievement of objectives is so important that some one person in any organization should have as part, if not all, of his responsibility continuing attention to over-all institutional problems of coordinating the current activities of people at work while anticipating and meeting future problems.

Generally speaking, unsystematic practices result from management attitudes that fall at or between two extremes. At the one extreme lies the company in which the need for improvement is not

too apparent. Long association in the same organization by the majority of currently satisfactory executives has led to an interpersonal adjustment or a "shaking down" into a comfortably acceptable, recognized way of getting along together. There is an understandable reluctance to tamper with something that seems to be producing results, almost always coupled with an unwillingness to admit that there might be a way to produce much better results. These two factors frequently keep an organization static until some real emergency forces the issue or new top leadership takes over.

At the other extreme, some companies seem to suffer from frequently recurring "reorganizations," perhaps as the result of a belief that all inadequacies of institutional performance can be cured by keeping everyone alert under the threat of replacement or reassignment. This type of thinking and action inevitably leads to lowered executive and employee morale, costly high turnover, and decreasing corporate effectiveness.

Between both of these extremes and heavily clustered around the average, we find varying degrees of attention to organizational problems—often undirected, sporadic, uncoordinated, and ineffective. There is some evidence of correlation between size of company and interest and attention given, largely because size makes the problems more apparent. As previously indicated, however, the subject is so important that it cannot be ignored, even in the smallest organization.

AN INTEGRATED IMPROVEMENT PROGRAM

The improvement of an existing organization should be approached in the same manner as the planning of an entirely new organization. The first step is to obtain an adequate definition of institutional objectives, both long and short term. Long-term objectives of a business enterprise have been well defined as follows: "The purpose of business enterprise is the profitable production of goods and services to fill economic needs in such a way as to provide satisfactory returns, both economic and social, to suppliers, owners, and members of the organization, under conditions which provide for the maximum conservation of human and material resources over a continuing period."

Short-term objectives usually have to do with financial results,

volume of business, geographic area of operations, etc., for perhaps a five- to ten-year future period. Note, however, that at no time is the sole objective the making of the greatest possible profit in any one period. The continuity of the enterprise, the safety of the investment, and the interests of the people within and outside of the enterprise may dictate the sacrifice of immediate profit for longer-term advantages, which may include greater potential for future profit. The organization plan must be so designed as best to satisfy all of the elements of the definition of both the long- and short-term objectives. The details of the plan will be established with a view toward scheduled achievement of short-term objectives, so that there will be some frequent measure of accomplishment other than the periodic profit-and-loss statement. Naturally, each short-term goal must make its contribution to the long-range plan.

The organization structure designed for optimum achievement will be made without any reference to the capacities and abilities of current or available personnel. The job content assigned to the planned positions is based on the assumption that individuals are available within or outside of the company to fill such positions, and that the most highly qualified individuals will be selected to carry out the duties ideally assigned to each job. For this reason, this first organization plan can be called the "ideal" plan.

The next step in the procedure is to reassign existing personnel in such a way as to approximate the ideal plan as closely as possible without serious human catastrophes. In order to do this, it will be necessary temporarily to modify the ideal plan to some extent. The result will be what might be termed an "interim" organization structure.

The interim organization structure must be recognized and publicized as such and its relationship to the ideal plan fully described. It will be installed in every respect, however, as though it were the ideal structure, including complete job descriptions containing definitions of limits of authority, reporting relationships, etc., under the interim arrangement. Whenever future changes in personnel are made, they should be made in such a way as further to approach the ideal job content. All management development and employee training activities should be aimed toward developing people with the abilities and capacities to handle ideal job content rather than

toward duplication of the functions of incumbents operating under the interim plan or some later adaptation thereof.

Furthermore, even the ideal plan must be made subject to further modification in the light of altered business, social, and economic circumstances that could not have been foreseen when the ideal plan was first designed. The ideal plan must never be considered as the final, irrevocable, inflexible answer to optimum achievement of institutional objectives. The ideal plan, like all other matters of administration, including objectives, must be dynamic.

At all stages in organization planning and control, the importance of achieving understanding and acceptance of current and long-term organizational objectives must be recognized. Frequently it may be necessary, in order to keep everyone informed and to avoid the circulation of undesirable rumors, to publish tentative plans or concepts. Several years ago, one well-known, medium-sized American company initiated a complete evaluation of its organization practices. Early in the study, it became apparent that its traditional concepts of the line and staff relationships might have to be radically altered. It was decided to issue a tentative statement that would describe the concepts to be applied, not only at the completion of the study, but to any changes that might have to be made during the interim period.

To many people, an announcement of this kind, prior to a thorough investigation, might seem hazardous, to say the least. On the other hand, it was recognized that the analysis would take time and, in the meanwhile, some unguided changes in organization might take place which would have to be reversed at the conclusion of the study. The guides tentatively established were based upon a study of available literature, as well as on practice in other companies that had achieved some progress in sound organization planning.

Most important, apprehensions of many staff executives, created by a vague knowledge that some unknown action was "in the wind," were allayed by a forthright statement of this kind. More objective cooperation by both line and staff people in the analytical work was obtained by making available some indication of the line of thought to be pursued. However, these favorable results were obtained only because the president had previously established himself as a leader. This statement, so far as his subordinates were concerned, evidenced

his readiness to take timely action to meet a pressing need, coupled with his willingness to recognize that further internal analysis might necessitate some later change.

THE ORGANIZATIONAL CHALLENGE

Justification of the management role in industry will hinge, in the future, upon management's ability to meet greatly expanded social and economic needs. Progress in technology, coupled with development of the peacetime uses of nuclear energy, will place new demands on management methods. Under pressure of apparently more immediate problems, the improvement and use of the human tool of organization has often been neglected. In their own companies, in their professional societies, and in their work with institutions of higher learning, managers must now take the lead in speeding the understanding and implementation of sound organization and administration. Management cannot afford the price of failure to exploit to the utmost any sound and ethical approach to improved performance.

Annual Reports Get Bigger and Better

THE ANNUAL REPORTS of American companies are more informative and complete than ever before, *American Business* reports, summarizing some results of an American Institute of Accountants survey of 600 industrial corporations. The Institute found that all but two presented complete sets of balance sheets, income statements, and surplus statements. In addition, 78 per cent of the companies included financial statements from past years to permit comparison. In 1946, only 41 per cent presented statements in comparative form.

During the period 1946 through 1955, the survey notes, there has been a steady increase in the use of the combined income and retained earnings statement, and a corresponding decrease in the use of a separate statement of income.

The traditional "Profit and Loss Statement" has almost disappeared, being used by only 10 per cent of the companies studied. Titles such as "Income Statement" and "Statement of Earnings" are now more popular. The term "Balance Sheet," although still the most common, has lost ground to such expressions as "Statement of Financial Position" and "Statement of Financial Condition."

Book Notes

(Please order books directly from publishers)

COMMUNITY RELATIONS FOR BUSINESS. By John T. McCarthy. Bureau of National Affairs, Inc., Washington, D.C. 1956. 286 pages. \$12.50. Based in large part upon the author's experience with the General Electric Company in its community relations program, this BNA Operations Manual explains why business should concern itself with the community; how small, medium, and large companies have developed effective relationships with their various "publics"; and how community action by management can help to create a more favorable climate for business enterprise.

THE ART OF SUCCESS. By the Editors of *Fortune*. J. B. Lippincott Company, New York. 1956. 302 pages. \$5.00. To ascertain "the ingredients of success in business in mid-century America," this collection of profiles, which originally appeared in *Fortune*, explores the careers of 21 nationally known figures in business, industry, and finance. While disclaiming any intention of producing a how-to-do-it-yourself manual, the authors suggest that the reader may find some common denominators of success among the five types of leaders analyzed: Corporation Men, Entrepreneurs, Silver Spoons, Wall Streeters, and Builders.

THE CHALLENGE OF SOVIET EDUCATION. By George S. Counts. McGraw-Hill Book Company, Inc., New York. 1957. 330 pages. \$6.00. This comprehensive account of the Soviet educational system shows how education is used as a political weapon and as a lever for social change in the USSR today. Noting that Soviet expenditures on education amount to more than 10 per cent of the national income as compared with only 3 per cent in the United States, the author warns against minimizing Soviet educational accomplishments and emphasizes the task America faces in keeping pace with them.

COMMON SENSE IN BUSINESS: A Digest of Management Procedures. By J. Seton Gray. McGraw-Hill Book Company, Inc., New York. 1965. 136 pages. \$3.50. Drawing upon the author's own experience in lifting a company from receivership to a profitable position in its industry, this book outlines 10 key problems which confront every business venture, large or small, and explains how management can tackle them successfully.

THE THEORY OF MONOPOLISTIC COMPETITION. By Edward Hastings Chamberlin. Harvard University Press, Cambridge, Mass. 1956. 350 pages. \$5.00. This seventh edition of a well-known economic treatise, originally published in 1933, combines the separate theories of monopoly and competition into a general theory of value. The principal change in this edition is an expanded bibliography of 1,497 items.

ATOMIC ENERGY FOR YOUR BUSINESS: Today's Key to Tomorrow's Profits. By Arnold Kramish and Eugene M. Zuckert. David McKay Company, Inc., New York. 1956. 269 pages. \$3.95. Intended as a practical guide for the business man, this volume deals with the fundamentals of atomic energy, its impact upon business, its current applications in industry, and the role of government and private enterprise in its future development. Among the appendices are a technical supplement, a dictionary of terms, and a selected bibliography.

OFFICE MANAGEMENT

A PRIMER TO THE AUTOMATIC OFFICE. By William Eustis. Automation Management, Inc., Westboro, Mass. 1956. 93 pages. \$7.50. This revised edition of an earlier publication, *The Automatic Office*, is designed as an introduction to the field. It emphasizes the intermediate steps between manual systems and fully automatic systems and describes how conventional machines may be combined with special-purpose equipment to service all types and sizes of office. Included are a number of diagrams as well as case histories of the use of integrated systems in various industries.

MANUAL OF OFFICE REPRODUCTION: *Reproduction Processes, Systems Duplications, Imprinting Methods.* By Irvin A. Herrmann. Office Publications Company, 232 Madison Avenue, New York 16, N.Y. 1956. 210 pages. \$3.25. A comprehensive guide to office reproduction processes and equipment, designed to aid the systems executive in making economical use of existing equipment or in selecting new equipment. In addition to some 100 charts, examples, and illustrations, the manual features a check list summarizing the advantages and disadvantages of each process.

COMPANY INVESTIGATIONS OF AUTOMATIC DATA PROCESSING. By Peter B. Laubach. Division of Research, Graduate School of Business Administration, Harvard University, Boston. 1957. 258 pages. \$3.00. A report on the methods used by leading companies in determining their need for data-processing equipment. Based on an investigation of some 40 management teams in various industries, the study describes how the teams were selected and organized, how equipment needs were evaluated, and on what terms new equipment was acquired.

THE PUNCHED CARD ANNUAL OF MACHINE ACCOUNTING AND DATA PROCESSING: *Volume Five.* Edited by D. A. Talucci. The Punched Card Publishing Company, 836 Maccabees Building, Detroit 2, Mich. 1956. 205 pages. \$8.50. This manual is organized in two sections. The first contains a number of nontechnical articles reviewing recent developments in data processing which are of general interest to management; the second deals with specific technical applications in this field. A cross index of earlier volumes in the series is appended.

INTEGRATED DATA PROCESSING FOR EVERY OFFICE. By H. John Ross. Office Research Institute, P.O. Box 744, Miami 43, Fla. 1957. 80 pages. \$2.00. This readable, pocket-size booklet explains the basic principles of integrated data processing and gives 10 simple rules for applying these principles and reducing clerical costs without resorting to expensive electronic equipment.

HOW TO USE A TAPE RECORDER. By Dick Hodgson and H. Jay Bullen. Hastings House, New York. 1957. 216 pages. \$4.95. Addressed to the layman rather than the expert, this book explains in simple terms how tape recorders work, how to select and operate a machine, and what to look for in repair or maintenance service. Several chapters are devoted to a discussion of the business uses of tape recorders.

Publications Received

(Please order directly from publishers)

GENERAL

THE GAPS IN OUR PROSPERITY. Conference on Economic Progress, 1001 Connecticut Avenue, N.W., Washington 6, D.C. 1956. 96 pages. 50 cents.

THE ROLE OF INDUSTRY IN MODERN SOCIETY. By J. T. Richardson. Department of Sociology, Marshall College, Huntington, West Virginia. 1956. 120 pages. Gratis.

WAGING PEACE: A Business Man Looks at United States Foreign Policy. By C. Maxwell Stanley. The Macmillan Company, New York, 1956. 256 pages. \$4.50.

PRODUCTIVITY TRENDS: CAPITAL AND LABOR. By John W. Kendrick. National Bureau of Economic Research, Inc., 261 Madison Avenue, New York 16, N.Y. 1956. 23 pages. 50 cents.

SCIENTIFIC CAPITALISM. By Gerald Barradas. Pageant Press, Inc., 130 W. 42 Street, New York 36, N.Y. 1956. 276 pages. \$5.00.

THE ROAD TO PERSUASION. By William Muehl. Oxford University Press, New York, 1956. 254 pages. \$3.95.

FACTORS LIMITING U.S. INVESTMENT ABROAD: Part 1—Survey of Factors in Foreign Countries. U.S. Department of Commerce, Office of International Trade. For sale by the Superintendent of Documents, U.S. Government Printing Office, Washington 25, D.C. 132 pages. 65 cents.

FACTORS LIMITING U.S. INVESTMENT ABROAD: Part 2—Business Views on the U.S. Government's Role. For sale

by the Superintendent of Documents, U.S. Government Printing Office, Washington 25, D.C. 1956. 60 pages. 40 cents.

SMALL BUSINESS AT THE CROSSROADS: A Study of the Small Business Retreat of 1953-1955. By Wilfred Lumer. The Public Affairs Institute, 312 Pennsylvania Avenue, S.E., Washington 3, D.C. 1956. 81 pages. \$1.00.

MIRACLE OF WORLD WAR II: How American Industry Made Victory Possible. By Francis Walton. The Macmillan Company, New York, 1956. 575 pages. \$7.50.

AUTOMATIC TECHNOLOGY AND ITS IMPLICATIONS: A Selected Annotated Bibliography. For sale by the Superintendent of Documents, U.S. Government Printing Office, Washington 25, D.C. 1956. Bulletin No. 1198. 76 pages. 45 cents.

TRADE ASSOCIATION LAW AND PRACTICE. By George P. Lamb and Sumner S. Kittelle. Little, Brown and Company, Boston, Mass. 1956. 284 pages. \$10.00.

THE GRAIN TRADE: How It Works. By James S. Schonberg. Exposition Press, 386 Fourth Avenue, New York 16, N.Y. 1956. 351 pages. \$6.00.

ORGANIZATION OF THE FEDERAL GOVERNMENT FOR SCIENTIFIC ACTIVITIES. Issued by the National Science Foundation. For sale by the Superintendent of Documents, U.S. Government Printing Office, Washington 25, D.C. 1956. 349 pages. \$1.75.

LEADERSHIP. By William Russel White. Meador Publishing Co., 324 Newbury Street, Boston, Mass. 1956. 2 Vols. Vol. I, 1,244 pages: Vol. II, 2,238 pages. \$20.00.

LEADERSHIP ABRIDGED. By William Russel White. Meador Publishing Co., 324 Newbury Street, Boston, Mass. 1956. 796 pages. \$6.00.

HOW TO MAKE THE MOST OF YOUR JOB: A Practical Philosophy of Work. By Eugene Carr. Coward McCann, Inc., New York, 1956. 128 pages. \$2.25.

ANACONDA: Life of Marcus Daly, the Copper King. By H. Minar Shoebotham. The Stackpole Co., Harrisburg, Penna. 1956. 220 pages. \$4.50.

MARKETING MANAGEMENT

TECHNIQUES OF RETAIL MERCHANDISING. By John W. Wingate and Elmer O. Schaller. Prentice-Hall, Inc., Englewood Cliffs, N.J. 1956. 574 pages. Second Edition. \$6.50.

INDUSTRIAL MARKETING OVERSEAS. By Graham Parker. Office of Graham Parker, 100 Park Avenue, New York 17, N.Y. 1956. 13 pages. Limited number of copies available on request.

THE CLASSIFIED CATALOG: Basic Principles and Practices. By Jesse H. Shera and Margaret E. Egan. American Library Association, 50 East Huron Street, Chicago 11, Ill. 1956. 160 pages. \$4.00.

THE PRINTERS' INK PORTFOLIOS FOR PLANNING #3: How to Get Better Retail Support for Your National Advertising. Printers' Ink Books, Pleasantville, N.Y., 1956. 80 pages. \$10.00.

THE PRINTERS' INK PORTFOLIOS FOR PLANNING #4: Trade Shows and Company Exhibits. Printers' Ink Books, Pleasantville, N.Y., 1956. 64 pages. \$10.00.

THE PRINTERS' INK PORTFOLIOS FOR PLANNING #6: Inquiries: How to Get the Most Out of Them. Printers' Ink Books, Pleasantville, N.Y., 1956. 64 pages. \$10.00.

FINANCIAL MANAGEMENT

FEDERAL RESERVE OPERATIONS IN THE MONEY AND GOVERNMENT SECURITIES MARKETS. By Robert V. Roosa. Federal Reserve Bank of New York, New York, 1956. 108 pages. Gratis.

MONETARY POLICY IN CONTINENTAL WESTERN EUROPE: 1944-1952. By Stephen F. Sherwin. Bureau of Business Research and Service, University of Wisconsin, Madison, Wisconsin. 1956. 311 pages. \$1.15.

NATIONAL INCOME ACCOUNTS AND INCOME ANALYSIS. By Richard and Nancy D. Ruggles. McGraw-Hill Book Company, Inc., New York. 1956. 452 pages. \$6.50.

PRICE-LEVEL CHANGES AND FINANCIAL STATEMENTS: Basic Concepts and Methods. By Perry Mason. American Accounting Association, College of Commerce and Administration, Ohio State University, Columbus, Ohio. 1956. 28 pages. 50 cents.

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